

Time Oil: 6- MSP

VOLUNTARY CLEANUP SECTION

PROJECT STATUS AND ISSUE REPORT

REPORTING PERIOD: May, 1992

PROJECT: Time Oil Company Terminal, North Portland

Thi.

PROJECT MANAGER: Mike Kortenhof

PROJECT TYPE: Responsible Party Initiated Letter Agreement

BACKGROUND:

Time Oil Company owns and operates a petroleum products storage terminal on approximately 52 acres located in the Rivergate area of North Portland. It is situated on the east bank of the Willamette River at 12005 North Burgard Road. Terminal operations began at this site in the 1940's. The facility, including 30+ above ground storage tanks, has handled jet fuel, gasoline, xylene, toluene, fuel oil, lube oil, butyl alcohol, isobutanol, methanol, Methyl 10, turpentine, pentachlorophenol, fatty acid, lignin liquor and liquid fertilizer.

A Federal Preliminary Assessment was performed for the facility in 1985. Soil contamination was identified resulting from waste oil handling and pentachlorophenol blending operations. The site was referred to the State for further action. Confirmed releases of pentachlorophenol, polychlorinated biphenols, lead, naphthalene and chrysene were identified. The facility is listed by the State as needing further information or investigation.

Time Oil Company ran a pentachlorophenol (penta) blending operation for Koppers Company on a portion of the subject property from 1967 to 1982. Operations consisted of heating and mixing penta granules with paraffin wax, mineral spirits and other solvents to produce various woodtreating products. The raw materials arrived on site by rail-tank car and truck. The product was shipped in 55 gallon drums and by tank truck.

Soil contamination in the area surrounding the penta operation was discovered in March of 1982. The tanks, piping and related equipment were removed. In 1985 surface soils throughout the penta operations area were removed to a depth of 1.5 feet and disposed of at the hazardous waste landfill at Arlington. Shortly thereafter, the Environmental Protection Agency banned land disposal of penta waste. Time Oil began investigating methods to treat the soil on site with the goal of reducing penta concentrations to 0.5 mg/kg or less. An additional 3,400 cubic yards of penta contaminated soil, with an average penta concentration of 950 mg/kg, was excavated in 1989 and stockpiled in a bermed, lined and covered soil pile.

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Soil with penta concentrations as high as 574 mg/kg remains in place at and below the water table (13 feet) in the area of the excavation. Higher levels of contamination remain in place under one corner of an adjacent warehouse. Sampling results show that the groundwater has been impacted in the immediate area of the blending operations, although the magnitude and extent of groundwater contamination is ambiguous.

Time Oil has identified bioremediation as a possible treatment method for the stockpiled soil, although full scale field tests have shown that it will not reach the 0.5 mg/kg goal. Time Oil has asked DEQ to consider alternative cleanup levels so they can start soil treatment operations as soon as possible.

PROJECT STATUS SUMMARY:

Time Oil entered a Voluntary Cleanup Agreement with the Department of Environmental Quality (DEQ) on July 17, 1991. They submitted a report describing work relating to the penta cleanup on December 6, 1991. A site visit was made by Mike Kortenhof on January 30, 1992. DEQ completed review of the report and prepared detailed comments on April 8, 1992. As a result of the review it was determined that the stockpiled soil was a listed hazardous waste that was not stored in compliance with Resource Conservation and Recovery Act (RCRA) regulations. Compliance with those regulations is expected to include site investigation and cleanup requirements. The project was been referred to the RCRA program of DEQ for resolution of those issues.

PROJECT ISSUE SUMMARY:

Time Oil is proposing on-site treatment and disposal of a listed hazardous waste (F027). Applicable Resource Conservation and Recovery Act (RCRA) regulations must be evaluated before comments on this proposal can be prepared.

The fate of penta contaminated soil remaining under the warehouse and below the water table is unknown.

The magnitude and extent of groundwater contamination due to the penta release is undefined.

The releases identified during the 1985 Preliminary Assessment still require additional investigation.

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QUARTERLY PLANNING:

April - June, 1992:

Work on this project under the voluntary cleanup program has been deferred pending resolution of the RCRA compliance issues. Further work on this project will be considered upon identification of RCRA mandated site investigation and cleanup requirements.

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TOLS004414

BZTO104(e)041235

SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
SAN PEDRO  
LOS ANGELES



To: L&P  
W&-  
Time Oil Co.  
TIME OIL CO.

2737 W. COMMODORE WAY, P.O. BOX 24447, TERMINAL ANNEX, SEATTLE, WA 98124

APR 32

March 14, 1975

Department of Environmental Quality  
1234 S. W. Morrison Street  
Portland, Oregon 97205

Dear Sirs:

Attached detailed report of oil spill at the Time Oil Company terminal facility in Portland, Oregon is submitted in compliance with paragraph (1)(e), section 47-015, of the Oregon Administrative Rules Compilation.

Sincerely,

*John P. Denham*  
John P. Denham  
Environmental Control Engineer

JPD/jf

Copy to:

Region X  
Environmental Protection Agency  
Attn: Mr. Jim Willman  
1200 Sixth Avenue  
Seattle, Washington 98101

NORTHWEST REGION OFFICE  
RECEIVED

MAY 16 1975

DEPARTMENT OF  
ENVIRONMENTAL QUALITY

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TOLS004415

LAWRENCE B

BZTO104(e)041236

STATISTICS

<u>Diesel</u>	<u>Bbls.</u>
<u>Conditions:</u>	
On barge prior to discharge	15,244
Discharged into tank 55021	11,334
On barge prior to discharge to tank 29508	3,910
Discharged into tank 29508 before rupture	1,837
Isolated on barge at time of rupture	2,073
In tank 29508 before receipt	24,470
In tank 29508 after rupture	5,301
On barge after rupture	7,480
In tank 15002 after rupture	4,843
In tank 5312 after rupture	3,283
In tank 5313 after rupture.	1,737
<u>Loss:</u>	
Quantity in tank 29508 before receipt	24,470
Plus quantity discharged into tank 29508 before rupture	1,837
Less quantity in tank 29508 after rupture	5,301
Less quantity recovered	17,343
Equals loss of	3,663

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TOLS004416

SUBJECT: OIL SPILL AT TIME OIL COMPANY TERMINAL - PORTLAND, OREGON

On March 8, 1975 Heating oil and Diesel on board PAC Barge 25 were being discharged to terminal storage tanks. Heating oil discharge operation started about 0700 hours and was completed at 1020 hours. Diesel discharge operation began immediately thereafter. Spill occurred, during the diesel operation, at tank 29508 and was due to tank rupture.

Operation took place as follows. Approximately 11,334 of the 15,244 total net barrels on board barge was received into tank 55021. At approximately 1530 hours, tank 55021 was filled and pumping to tank 29508 was started. When pumping to tank 29508 began, Neil Gallagher (Terminal Superintendent) departed for home. Otto Saylor and Wayne Schmidt remained on duty. At approximately 1630 hours, Schmidt was inspecting the pipelines being used and was within 100 feet of tank 29508 when the vertical weld on the second ring from the tank bottom ruptured. Schmidt observed the initial rupture (approximately 6 inches in length) instantly spread to the full six (6) foot length of the vertical weld. Schmidt immediately caused barge pumping to stop. The bargeman isolated remaining product on board, then opened all empty barge tanks and started receiving tank 29508 product back on the barge. Superintendent was notified, returned to the terminal at about 1650 hours, and effected emergency actions. Empty tank 15002, adjacent to tank 29508, was opened and began receiving product by gravity flow through an 8 inch line. Tank 5313, already containing approximately 121 bbls. of diesel and on a common line with tank 15002, was also opened. The U.S. Coast Guard office was informed of the rupture at approximately 1700 hours.

Spill accumulation had flowed to a low area adjacent to tank 5312. A portable 3 inch transfer pump was put into operation and spill recovery operations began about 1730 hours with the pumping into empty tank 5312. Another 2 inch pump was put into operation at a second low spot by tank 5313 and pumping started to that tank. Two additional personnel were called in to work. The Willamette Tug and Barge Company was called to deploy the company's on hand oil containment boom just in case any oil might reach the river. Boom was deployed by 1830 hours.

PO-2 Melvin Harris of the U.S. Coast Guard was on site. He requested his office call the Portland Fire Department, then took pictures of the tank rupture. The plant entry gate had been closed as part of the emergency operations procedure, and a company employee was standing by it with instructions to permit only necessary company personnel or emergency vehicles to enter. The fire department arrived at approximately 1930 hours and surveyed the area.

At approximately 2200 hours, when the product level in tank 29508 had been decreased somewhat and there was no possible chance of injury to personnel, a ladder was placed against the tank and cedar shingles were driven into the crack. Spill was then reduced to a minimum.

TOLS004417

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SUBJECT: OIL SPILL AT TIME OIL COMPANY TERMINAL - PORTLAND, OREGON Page 2

At 0015 hours, March 9th, the product in tank 29508 was below the rupture. Transfer to the barge was stopped. Barge was gauged. Gauge showed barge had received approximately 7,480 barrels. When tank rupture occurred, there was 2,073 barrels remaining on the barge. 1,837 barrels had, therefore, been discharged into tank 29508 before the rupture. The 7,480 barrels of product returned to the barge and the 2,073 barrels previously on board were then pumped to tank 16804. Final product transfer was completed at 0500 hours on March 9th.

Meanwhile, portable pumps were continually being moved to different locations where other low spots existed and all visible spill accumulations were recovered by 1700 hours on March 9th. Recovery operations continued on March 10th. Beginning at 0700 hours, holes were hand dug in many places and any small quantities of oil were transferred to tank 5312. Oil sorbent pads were simultaneously deployed throughout the area and pick-up accomplished. A backhoe was then brought in and large holes dug throughout the area in search of remaining oil accumulation. None could be found. As a final recovery effort on March 11th, certain areas were flooded with fresh water. No oil accumulation resulted.

Overall corrective action started March 12th when complete removal and disposal of all ground in the spill area was begun. Ground is being replaced with newly purchased soil. Tank is to be repaired and tested prior to being returned to service.

Synopsis: At approximately 1630 hours on March 8, 1975, a diesel oil spill occurred at the Time Oil Co. terminal in Portland, Oregon. Spill resulted from a tank rupture. Emergency procedures were effected in accordance with Operations Manual. Spill was contained by secondary containment diked area inside property boundaries. At no time did any product reach navigable waters. 3,663 bbls. of diesel oil were lost.

32318

TOLS004418

BZTO104(e)041239

JUN 14 1985

**MEMORANDUM**

June 11, 1985

**TO:** Robert Abendroth  
✓ Bill Baldwin  
Don Marion  
Neil Wallis

**FROM:** John Denham

**SUBJECT:** NORTHWEST TERMINAL WOODTREATING SITE

Seattle  
Pittsburgh  
Pittsburgh  
Portland

Seattle

This is a status update regarding cleanup of soil at our Portland Oregon terminal where the Pentachlorophenol operation existed.

Following Don Marion and Bill Baldwin's March 13, 1985 visit, the following occurred:

- a. On April 2, Bill B called to coordinate results of his contact with Koppers geologists. Bill requested sampling per enclosure 1. On April 4, Robert A agreed with this action. On April 5, Neil W was tasked to locate a firm to accomplish soil sampling and a laboratory which could handle this sizable soil analysis within a reasonable time frame at the lowest possible costs.
- b. After a diligent search, it was learned there was only one firm in the area that had the capability to do this job - Riedel Environmental Services, Inc. On April 25, Riedel submitted their cost of \$18,600 (enclosure 2). I asked for a cost breakdown. Riedel submitted it on May 18 (enclosure 3). Drilling cost of \$7,544 is actual fee of drilling contractor Sweet and Edwards out of Kelso (I verified this). Analytical cost of \$4,956 is strictly the laboratory charge for processing 96 samples from 16 holes at 6 six samples per hole. (Note this is 7 less holes than Bill B requested but covers a larger 80' x 80' area). Method of analysis is GC/MS, which is the only one allowed by EPA/DEQ. Cost to analyze each sample is \$51.63. Labor cost of \$3,985 includes taking nine additional composite surface samples (3 on northeast, 3 on east and 3 on south) outside bermed area to determine soil contamination boundaries, taking the 96 samples mentioned above, drawing the drilling plan, preparing the contour map which shows location of contamination at the various depths, supervision of entire job on site by a qualified hydrologist and writing the report. Other direct costs of \$2,115 cover decontamination of equipment between the taking of each sample, sample jars, safety gear used, drums for and disposal of decontamination solvent used for all equipment decontamination and the bentonite used to plug all holes drilled.

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TOLS004419

- c. Contract with Northwest Vacuum Truck Service was negotiated (enclosure 4). Certificate of insurance coverage (enclosure 5) and contract bond (enclosure 6) were obtained from contractor. An "approved" transporter was obtained (Gresham Transfer Service).
- d. Disposal request for contaminated soil was approved by DEQ (Enclosure 7).
- e. Hazardous Waste Manifests with appropriate instructions were obtained (enclosure 8).
- f. The required "Waste Transportation and Disposal Agreement" was obtained from Chem-Security Systems, operators of the Arlington disposal facility (enclosure 9). I disagreed with item 2(b) on page 17 (in that it limited disposal on this tender to only one movement) and item 10(c) on page 20 (in that there was no price-break after 250 tons as was originally quoted). Telecon contact with their offices resulted in satisfactorily worded replacement pages for agreement, which arrived today and are included in enclosure 9.

At this point in time, everything seems to be "go". All arrangements have been made to start the first phase of digging, hauling and disposing on June 24, 1985. I will be on site. Plan is to remove and dispose of several truck loads of soil, stop, have sampling and analyses done, then repeat as needed. This approach takes advantage of lower disposal costs (prior to July 1) and the conduct of the expensive sampling and analysis only one time. Current known costs for first phase are \$53,000 plus \$18,600 = \$71,600.

JPD/ch

TOLS004420

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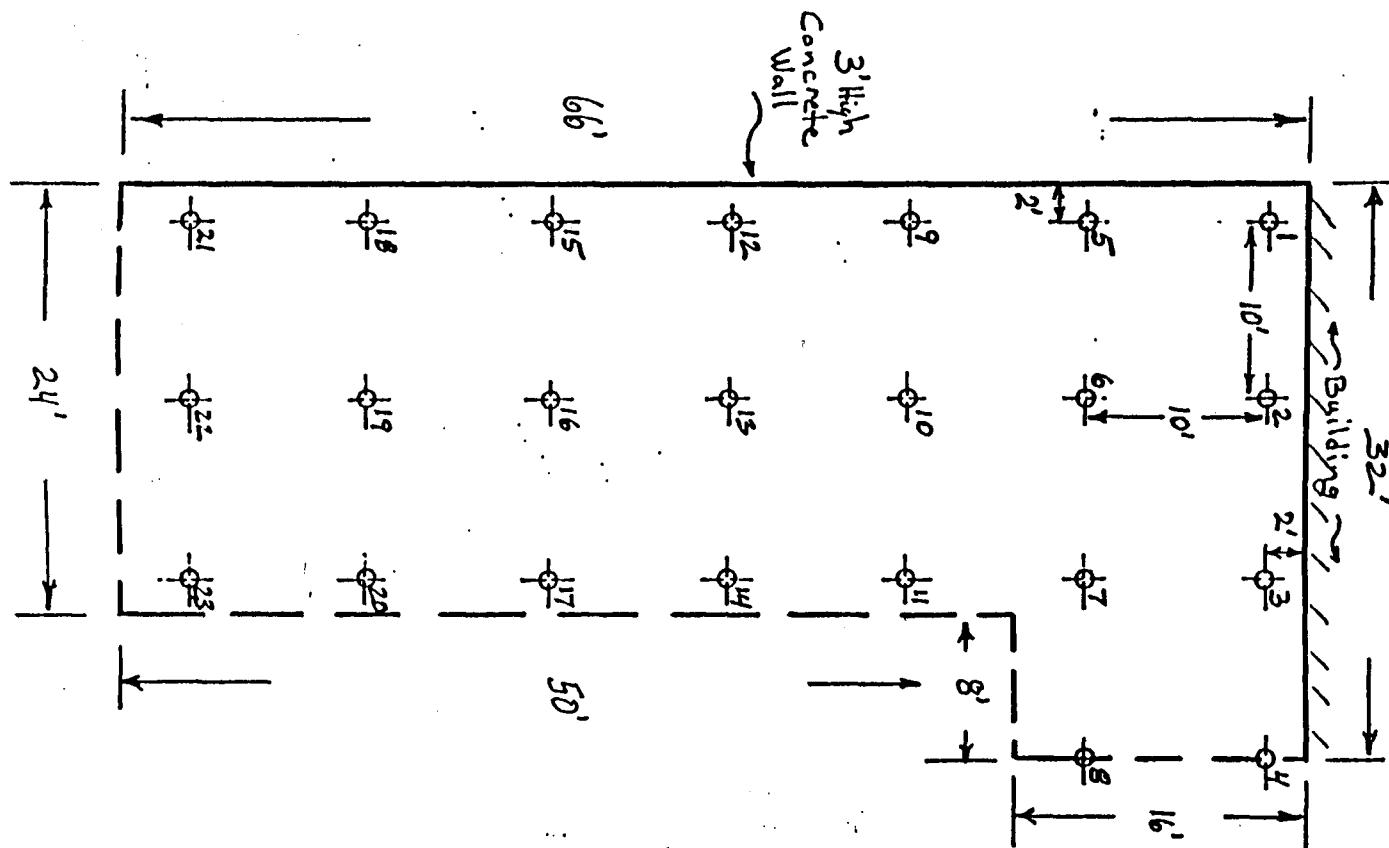
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Encl. /

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NORTHWEST TERMINAL WOODTREATING SOIL SAMPLING PLAN

Scale: 1" = 10'



1. Drill 23 holes and obtain samples from each.
2. On holes 2, 3, 4, 6 & 7:
  - a. Sample at 6", 1', 2', 3', 5', 10' and 15' levels.
  - b. Analyze samples at 1', 2', 3', 5' & 10' levels (25 analyses). Also analyze holes 2,3 & 6 at 15' level.
  - c. Hold remaining samples at 40 degrees F.
3. On all other holes:
  - a. Sample at 6", 1', 2', 3', 5' and 10' levels.
  - b. Analyze samples at 6", 1', 2' & 3' levels (72 analyses).
  - c. Hold remaining samples at 40 degrees F.

TOLS004421

"Imagineering a cleaner world"



RIEDEL  
ENVIRONMENTAL SERVICES, INC.

April 25, 1985

Mr. Neil Wallis  
Time Oil Company  
P. O. Box 03137  
12005 N. Burgard Street  
Portland, OR 97203

Dear Neil:

Thank you for the opportunity to visit your plant and discuss with you the pentachlorophenol sampling requirements you have at your northwest terminal wood treating site.

We propose that an initial composite sample survey be initiated to accurately define the boundaries of the PCP contamination zone. These surface samples would be collected to establish the actual area to be sampled later by coring at depth, and are warranted since the data indicates contamination at a site outside of your original proposed sampling plan. This task would be performed at a time and materials rate. It would be expected to be quite nominal relative to the core sampling, and will minimize the possibility of having to remobilize the drill rig to modify or extend the core sampling procedure in the future.

We will also review the sampling plan and, with DEQ approval, design a sampling plan that will meet their requirements while minimizing the number of holes needed. This task would also be billed at a time and materials rate and may utilize a triangular sampling matrix to improve coverage.

Riedel Environmental Services is prepared to perform the actual sampling and analysis including grid layout, drilling, sampling at six depths, analysis for PCP, decontamination of personnel and equipment, PCP concentration contour analysis, report and background level determination. The estimate for this task is \$18,600, would require five days on site, and is based on an estimated sample area of 80' x 80'. If preliminary composite samples indicate a different area, this bid will be revised accordingly. If tetrachlorophenol analyses are also required, analytical costs will increase this bid by \$5,000.

On the basis of the above results, RES can prepare an estimate for removal and disposal of the contaminated soils. We can also include monitoring or observation wells if required.

Portland Division  
Foot of N. Portsmouth Ave  
P.O. Box 5007  
Portland, OR 97208  
(503) 285-4556

St. Louis Division  
529 Sprt of St. Louis Blvd.  
Chesterfield, MO 63017  
(314) 532-7660

San Francisco Division  
220 Cutting Blvd.  
Richmond, CA 94802  
(415) 234-7400  
or (415) 398-6351

Seattle Division  
901 Fairview Ave. No.  
P.O. Box 1730  
Seattle, WA 98111  
(206) 622-2900

2319

For Fast Emergency Response, Call Environmental Emergency Services Co.  
on 24-Hour Hotline (800) 547-0792

Enc. 2

TOLS004422

BZTO104(e)041243

Mr. Neil Wallis  
Time Oil Company  
April 25, 1985  
Page Two

Please contact either myself or Rick Gariepy if you have any questions or would like additional information.

Sincerely,

RIEDEL ENVIRONMENTAL SERVICES, INC.



John H. Ruddick  
Microbiologist

JHR:kps

GSB

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TOLS004423

BZTO104(e)041244

"Imagineering a cleaner world"



RIEDEL  
ENVIRONMENTAL SERVICES, INC.

May 18, 1985

Portland Division  
Foot of N Portsmouth Ave  
P O Box 5007  
Portland, OR 97208  
(503) 286-4656

St. Louis Division  
529 Spruce St St. Louis Blvd  
Chesterfield, MO 63017  
(314) 532-7660

San Francisco Division  
230 Cutting Blvd  
Richmond, CA 94802  
(415) 234-7400  
or (415) 398-5351

Seattle Division  
901 Fairview Ave. No.  
P O. Box 1730  
Seattle, WA 98111  
(206) 522-2900

Mr. Neil Wallis  
Time Oil Co.  
P. O. Box 03137  
12005 N. Burgard  
Portland, OR 97203

Dear Neil:

The cost breakdown on our bid for sampling and analysis of PCP contaminated soil at your facility is as follows:

Drilling	\$ 7,544
Analytical	4,956
Labor	3,985
Other Direct	2,115
	<u>\$18,600</u>

If you have any questions, please don't hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "John Ruddick".

John Ruddick  
Microbiologist

JR:kps

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TOLS004424

For Fast Emergency Response, Call Environmental Emergency Services Co.  
on 24-Hour Hotline (800) 547-0792

Encl. 3

BZTO104(e)041245

CONTRACT

The parties to this agreement are Time Oil Co. (hereinafter termed owner) and Northwest Vacuum Truck Service, Inc. (hereinafter termed contractor) whereas:

Owner has a volume of earthen material located in Portland, Oregon and owner is desirous of having that material removed.

Contractor is willing to undertake that task upon the terms and conditions set forth below.

Therefore, in consideration of the agreements contained herein, the parties agree as follows:

1. Contractor agrees to remove the material from its present location, load it into suitable transportation vehicles and transport it to a disposal facility approved by the Oregon Department of Environmental Quality.
2. The material to be removed by contractor is generally set forth on the drawing labeled exhibit 1, attached hereto and incorporated by this reference. Prior to work under this agreement, a representative of owner will meet with contractor at the site and the extent of the material to be removed will be more specifically delineated at that time.
3. The commencement date for work will be February 21, 1985 or such other date as may be agreed upon by the parties following coordination with the Department of Environmental Quality and the authorized disposal facility. Work is intended to be divided into two phases. First phase consists of material removal to an agreed upon depth. Then there will be a several day delay while additional tests are conducted to determine if further removal is required. If so, phase two removal actions are to be effected. Should there be any need to continue removal, above process is to be repeated until ultimate removal is accomplished.
4. For each day worked, owner agrees to pay contractor the sum of 1200 dollars for labor and equipment pertaining to soil removal plus 600 dollars for each truckload of soil transported. A day worked shall be one wherein earth moving equipment, necessary to perform the work, has been utilized to the fullest, reasonably possible, extent for a period of not less than 8 hours. Truck shall be a standard 18 yard rated capacity vehicle. Payment will be made upon completion of the work and receipt by owner of written acknowledgement from the approved disposal facility that all material removed and transported by contractor has been received at that facility.
5. Contractor indemnifies and agrees to defend and hold owner harmless from any and all costs, claims, liabilities and damages arising out of contractors work under this contract.
6. Contractor hereby declares that it is engaged as an independent contractor and agrees to perform the work as independent contractor and not as an employee of owner. Contractor has and hereby retains the right to exercise full control and supervision of the work and full control over the employment, direction, compensation and discharge of all persons assisting in the work.

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Encl. 4

7. Contractor agrees at its expense to obtain all governmental permits, licenses and approvals and comply with all laws, rules, regulations and requirements now or hereafter existing necessary for the accomplishment of the work to be performed by contractor under this agreement.
8. Contractor especially acknowledges its understanding that portions of the material to be removed, transported and disposed of under this agreement have been found to contain commercial pentachlorophenol in concentrations ranging from 0 ppm to 1820 ppm. Contractor agrees to take all necessary precautions for the protection of persons and property that may be required or prudent in the removal and transportation of that material.
9. Contractor agrees to maintain workmans' compensation insurance in the form and amounts required by the laws of the state of Oregon and broad form comprehensive public liability insurance with minimum limits of \$1 million per person and \$1 million per accident for bodily injury and \$500,000 per accident for property damage. Contractor shall promptly deliver to owner certificates of said insurance, naming owner as an additional insured before commencing work and such certificate shall provide that said insurance shall not be cancelled prior to 30 days by written notice to owner.
10. Contractor agrees that before commencement of any work hereunder, it will promptly furnish owner with a faithful performance bond in an amount to 53,000 dollars guaranteeing completion of all work and performance of all obligations undertaken by contractor under this agreement.
11. The nature, validity and interpretation of this contract shall be governed by the laws of the state of Washington.

Dated this 19th day of February 1985.

OWNER  
Time Oil Co.

by John P. Denham  
John P. Denham  
Environmental Manager

CONTRACTOR  
Northwest Vacuum Truck Service Inc.

by John H. Somes  
John H. Somes  
General Manager

323:9

TOLS004426

BZTO104(e)041247

CONTRACT BOND

Bond No. H 34156

KNOW ALL MEN BY THESE PRESENTS, That we, NORTHWEST VACUUM TRUCK SERVICE, INC.

5555 NORTH CHANNEL - BLDG. 43 - PORTLAND, OREGON 97217

called the Principal, and HERITAGE INSURANCE COMPANY OF AMERICA A ILLINOIS corporation, called the Surety, are held and firmly bound unto TIME OIL CO.

called the owner in the sum of FIFTY THREE THOUSAND AND NO/100THS

Dollars (\$ 53,000.00\*\* ), for the payment whereof said Principal and Surety bind themselves firmly by these presents.

WHEREAS, the Principal has, by written Agreement, dated MARCH 12, 19 85, entered into a Contract with the Owner for REMOVAL OF EARTHEN MATERIAL OWNED BY OWNER FROM ITS PRESENT

LOCATION, LOAD IT INTO SUITABLE TRANSPORTATION VEHICLES AND TRANSPORT IT TO A DISPOSAL FACILITY APPROVED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY.

a copy of which is by reference made a part hereof;

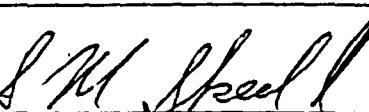
NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, That if the Principal shall faithfully perform the Contract, and indemnify and save harmless the Owner from all loss, cost or damage which Owner may suffer by reason of any lien arising out of claim for labor or materials utilized in the construction under said Contract, then this obligation shall be void; otherwise to remain in full force and effect.

Signed and sealed this 12TH day of MARCH, 19 85.

NORTHWEST VACUUM TRUCK SERVICE, INC.

Principal

By:



HERITAGE INSURANCE COMPANY OF AMERICA

By:



J.N.C. BAUMANN

Attorney-in-fact

32310

TOLS004427

Enc. 6

**HERITAGE INSURANCE COMPANY OF AMERICA**

LINCOLNWOOD, ILLINOIS

**Power of Attorney**

**PRINCIPAL** NORTHWEST VACUUM TRUCK SERVICE, INC. **EFFECTIVE DATE** MARCH 12, 1985

**DBA** \_\_\_\_\_ **AMOUNT OF BOND \$** 53,000.00

**POWER NO. H** 34156

**KNOW ALL MEN BY THESE PRESENTS:** That the Heritage Insurance Company, a Corporation in the State of Illinois, having its principal office in Lincolnwood, Illinois, pursuant to the following resolution, adopted by the Board of Directors of the said Company on the 9th day of March, 1979, to wit:

"The President, or any Vice-President, or other officer designated by the Board of Executive Committee shall have authority, severally, to make, execute and deliver a power of attorney constituting as Attorney-in-Fact such persons, firms or corporations as such officers may select from time to time."

does hereby make, constitute and appoint J.T. Kohoutek, C.J. Huffman and/or J.C. Baumann of Seattle in the State of Washington, its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its behalf, and its act and deed, as follows:

The obligation of the Company shall not exceed the sum of five hundred thousand (\$500,000.00) dollars.

and to bind Heritage Insurance Company thereby as fully and to the same extent as if such bond or undertaking was signed by the duly authorized officers of the Heritage Insurance Company, and all the acts of said Attorney(s) pursuant to the authority herein given, are hereby ratified and confirmed.

**IN WITNESS WHEREOF,** the Heritage Insurance Company has caused these presents to be signed by its President and/or its Vice-President, and its Corporate Seal to be hereto affixed.



**HERITAGE INSURANCE COMPANY OF AMERICA**

*Vincent M. Giacinto*

Vincent M. Giacinto, President

**State of Illinois } SS:**  
**County of Cook }**

On this 9th day of March, 1979, before the subscriber, a Notary Public of the State of Illinois in and for the County of Cook duly commissioned and qualified, came V. M. Giacinto of the Heritage Insurance Company, to me personally known to be the individual and officer described herein, and who executed the preceding instrument, and acknowledged the execution of the same, and being by me duly sworn, deposed and said, that he is the officer of said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and signature as an officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporation, and that the resolution of said Company, referred to in the preceding instrument, is now in force.

**IN TESTIMONY WHEREOF,** I have hereunto set my hand, and affixed my official seal at Lincolnwood, Illinois, the day and year above written.



*Joseph D. Udoni*  
Notary Public

JOSEPH D. UDONI  
NOTARY PUBLIC, State of Illinois  
Qualified in State of Illinois  
Commission Expires March 4, 1984

**State of Illinois } SS:**  
**County of Cook }**

**CERTIFICATE**

I, the undersigned, Secretary of HERITAGE INSURANCE CO, a stock corporation of the State of Illinois, DO HEREBY CERTIFY that the foregoing and attached Power of Attorney and Certificate of Authority remains in full force and has not been revoked; and furthermore, that the Resolution of the Board of Directors, as set forth in the Certificate of Authority, are now in force.

Signed and Sealed at the Home Office of the Company, at Lincolnwood, Illinois. Dated this 12TH day of

MARCH A.D. 19 85



*Carrie A. Taaffe*  
Secretary

32319

H-73

TOLS004428

BZTO104(e)041249

## Certificate of Insurance

cord

THIS CERTIFICATE IS ISSUED AS A MATTER OF RECORD FOR THE RECORD AND CONSIDERATION ONLY, AND CONCERNING THE RIGHTS SET FORTH IN THIS CERTIFICATE, WHICH CERTIFICATE IS NOT AN AMENDMENT OR EXTENSION OF ANY OTHER DOCUMENTS, AGREEMENTS, POLICIES OR TERMS AFFORDED BY THE POLICIES LISTED BELOW.

**NAME AND ADDRESS OF AGENCY**

MARSH & MCLENNAN, INCORPORATED  
MARSH & MCLENNAN BUILDING  
720 OLIVE WAY  
SEATTLE, WASHINGTON 98101  
(206) 223-1240

**NAME AND ADDRESS OF INSURED**

NORTHWEST VACUUM TRUCK SERVICE, INC.  
POST OFFICE BOX 24402  
SEATTLE, WASHINGTON 98124

## **COMPANIES AFFORDING COVERAGES**

COMPANY LETTER	<b>A</b>	SAFECO
COMPANY LETTER	<b>B</b>	
COMPANY LETTER	<b>C</b>	
COMPANY LETTER	<b>D</b>	
COMPANY LETTER	<b>E</b>	

This is to certify that policies of insurance listed below have been issued to the insured named above and are in force at this time. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies.

COMPANY LETTER	TYPE OF INSURANCE	POLICY NUMBER	POLICY EXPIRATION DATE	Limits of Liability in Thousands (000)		
					EACH OCCURRENCE	AGGREGATE
A	GENERAL LIABILITY	CP 842833	05/30/85	BODILY INJURY	\$	\$
	<input checked="" type="checkbox"/> COMPREHENSIVE FORM			PROPERTY DAMAGE	\$	\$
	<input checked="" type="checkbox"/> PREMISES—OPERATIONS HAZARD					
	<input checked="" type="checkbox"/> EMISSION AND COLLAPSE HAZARD					
	<input checked="" type="checkbox"/> UNDERGROUND HAZARD					
	<input checked="" type="checkbox"/> PRODUCTS COMPLETED OPERATIONS HAZARD					
	<input checked="" type="checkbox"/> CONTRACTUAL INSURANCE					
	<input checked="" type="checkbox"/> ROAD FORM PROPERTY DAMAGE					
	<input checked="" type="checkbox"/> INDEPENDENT CONTRACTORS					
	<input checked="" type="checkbox"/> PERSONAL INJURY					
A	AUTOMOBILE LIABILITY	BA 842833 A	05/30/85	BODILY INJURY (EACH PERSON)	\$	\$
	<input checked="" type="checkbox"/> COMPREHENSIVE FORM			BODILY INJURY (EACH ACCIDENT)	\$	\$
	<input checked="" type="checkbox"/> OWNED			PROPERTY DAMAGE	\$	\$
	<input checked="" type="checkbox"/> HIRED					
	<input checked="" type="checkbox"/> NON-OWNED					
A	EXCESS LIABILITY	UL 842833	05/30/85	BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$1,000,	\$1,000,
	<input checked="" type="checkbox"/> UMBRELLA FORM					
	<input type="checkbox"/> OTHER THAN UMBRELLA FORM					
	WORKERS' COMPENSATION and EMPLOYERS' LIABILITY			STATUTORY		
	OTHER					

**DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES**

As respects the operations of the Insured.

TOLS004429

**Cancellation:** Should any of the above described policies be terminated before the expiration date thereof, the issuing company will endeavor to mail 20 days written notice to the below named certificate holder, but failure to mail such notice shall impose no obligation or liability of any kind upon the company.

ACCOUNT EXECUTIVE: Jo Ann Crook

Time Oil Company  
2737 West Commodore Way  
Seattle, Washington 98199  
Attention: John Denham

DATE ISSUED March 5, 1985 (mf) \_\_\_\_\_  
**MARSH & MCLENNAN, INCORPORATED**

By: John C. Day

(John C. Day)

(John C. Day)

ACCORD 25 (1-79)

32319

BZTO104(e)041250

ENCL.5

32319

# SAIF CORPORATION

INSURING COMPANY:

- SAIF CORPORATION
- SAIF CORPORATION OF OREGON

## Certificate of Coverage

Date of Issue: FEBRUARY 25, 1985

This certifies that NW VACUUM TRUCK SERVICE INC., Policy No. 426329,  
is insured with SAIF, with a policy period ending date of JUNE 30, 1985,  
and is complying with the Oregon Workers' Compensation Law to provide for payment of compensation to subject  
Oregon workers.

TO: TIME OIL CO,  
2737 W. COMMODORE WAY  
SEATTLE, WASHINGTON 98199

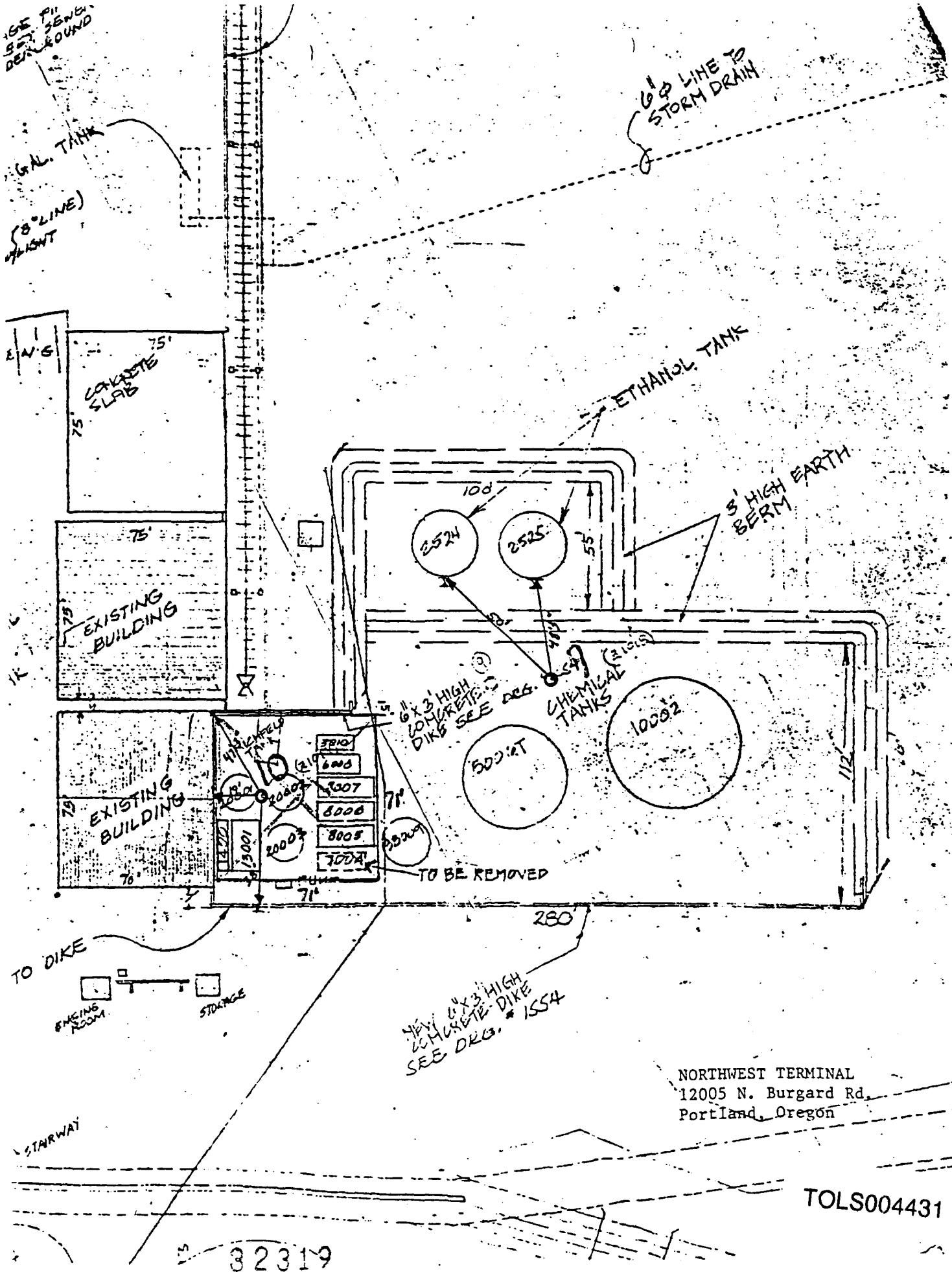
ATTN: JOHN DENHAM



Michael J. Dora  
Director  
Underwriting Division

F1220 1/84

TOLS004430



TOLS004431

BZTO104(e)041252

**Marsh &  
McLennan**

Marsh & McLennan, Incorporated  
Marsh & McLennan Building  
720 Olive Way  
Seattle, Washington 98101  
Telephone (206) 223-1240

March 5, 1985

Time Oil Company  
2737 West Commodore Way  
Seattle, Washington 98199

Attention: John Denham

Insured Northwest Vacuum Truck Service, Inc.

Company and Policy No. Safeco

Various - See attached  
certificate

Coverage \_\_\_\_\_

Location Post Office Box 24402  
Seattle, Washington 98124

- ( ) Policy enclosed  
(xx) Certificate ~~xxx policy xx copy x~~ enclosed  
( ) Premium invoice enclosed for \_\_\_\_\_  
( ) Premium invoice will be mailed to you by the Insuror  
( ) Mortgage or Loss Payable clause enclosed  
( ) Contract of Sale clause enclosed  
( ) Please return for cancellation, Policy No. \_\_\_\_\_  
( )

Sincerely yours,

MARSH & MCLENNAN, INCORPORATED

*Jackie Starr*  
By Jackie Starr

Account Representative

Enclosures

mf

cc: Northwest Vacuum Truck Service, Inc.  
Attn Mr. Steve Skeel

TOLS004432

32319

BZTO104(e)041253

CHEM-SECURITY SYSTEMS, INC

## DISPOSAL REQUEST

REC'D T.O.C. PORTLAND 5/16/85

REFERENCE: E13588

WASTE PROFILE SHEET NO.

## SUBJECT:

WASTE STREAM NAME: PCP contaminated soil

## PHYSICAL STATE

LIQUID  SOLID  SEMISOLID 

1D42

EPA WASTE CODE

GENERATOR NAME: TIME OIL CO.

ORD009597543

EPA GENERATOR I.D. NUMBER

## FACILITY ADDRESS

Time Oil Co.

12005 N. Borgard Rd.

Portland, Or

Name

GENERATOR CONTACT PERSON NAME: John P. Denham

Tel. No. 206 285-2400

Review and approval of the subject waste stream is requested for disposal at the Chem-Security Arlington site. The complete waste description is detailed on the attached waste profile sheet and is summarized below.

DESCRIPTION CHEMICAL COMPOSITION	PROCESS/OPERATION GENERATING WASTE
-------------------------------------	---------------------------------------

Contaminated soil (pentachlorophenol, tetrachlorophenol other chlorinated chemicals) non-contaminated soil

Clean up

WASTE VOLUME REQUESTED FOR DISPOSAL: 260 cubic yards

NOW ANNUAL

Based on the Waste Characteristics, Chem-Security proposes to Dispose of the Waste By (Describe Treatment/Disposal Procedure)

Landfill by Procedure 4

No free liquid allowed.

C.C. CSSI, Arlington, OR  
 C.C. CSSI, Bellevue, WA  
 CSSI, Portland, OR  
 Generator

SUBMITTED BY: J. Craig McKenzie

NAME (PRINT)

*J. Craig McKenzie*

SIGNATURE

4-29-85

DATE

FOR OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY USE ONLY

THE SUBJECT WASTE STREAM HAS BEEN REVIEWED FOR  
DISPOSAL AT THE ARLINGTON SITE AND IS HEREBY:

COMMENTS:

State of Oregon  
 Department of Environmental Quality  
 APPROVED  
 On: May 14, 1985  
 By: Edward L. Cheing  
 Solid Waste Division  
 Hazardous Waste Operations

32319

TOLS004433

RE: HW4.10

CSSI-6000 (1/85)

Encl. 7

BZTO104(e)041254

## CHEM-SECURITY SYSTEMS, INC.

Please print or type, do not use a carbon copy.  
Form designed for use on 8 1/2 x 11 inch (12-pitch) typewriter.

NATIONAL RESPONSE CENTER 1-800-424-8802  
OREGON ACCIDENT RESPONSE CENTER 1-800-452-0311

Form Approved, OMB No. 2000-0404, Expires 7-31-86

## UNIFORM HAZARDOUS WASTE MANIFEST

3. Generator's Name and Mailing Address		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law.
4. Generator's Phone ( )				A. State Manifest Document Number	
5. Transporter 1 Company Name		6. US EPA ID Number	B. State Generator's ID		
7. Transporter 2 Company Name		8. US EPA ID Number	C. State Transporter's ID		
9. Designated Facility Name and Site Address		10. US EPA ID Number	D. Transporter's Phone		
Chem-Security Systems, Inc. Star Route Arlington, Oregon 97812		ORD 089 452 353	E. State Transporter's ID		
F. Transporter's Phone		G. State Facility's ID		H. Facility's Phone	
				503-454-2643	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)  HM		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	EPA/ Waste No.
a.					
b.					
c.					
d.					
J. Additional Descriptions for Materials Listed Above a. b. c. d.		K. Handling Codes for Wastes Listed Above			

## 15. Special Handling Instructions and Additional Information Waste Profile Sheet Number(s)

- a.  
b.  
c.  
d.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Date

Printed/Typed Name	Signature	Month	Day	Year
17. Transporter 1 Acknowledgement of Receipt of Materials				
Printed/Typed Name	Signature	Month	Day	Year
18. Transporter 2 Acknowledgement of Receipt of Materials				
Printed/Typed Name	Signature	Month	Day	Year

## 19. Discrepancy Indication Space

TOLS004434

## 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date
32319		Month Day Year

ORIGINAL-RETURN TO GENERATOR

8700-22-34  
EPA Form 8700-22-34  
Rev. 10-85

BZTO104(e)041255

#### 4.0 MANIFEST REQUIREMENTS

When hazardous waste is transported from the generator's location to the Arlington Facility, the Oregon DEQ, U.S. DOT and EPA require proper manifesting. Beginning September 20, 1984, these agencies required use of a uniform hazardous waste manifest form (Exhibit 7a) and, where necessary, a continuation sheet (Exhibit 7b).

Each load of chemical waste shipped to the Arlington Facility must be accompanied by one or more properly completed uniform manifests. All copies of manifests and continuation sheets must be legible. If manifest forms are needed by the generator, treater or transporter, they can be obtained by contacting the appropriate Chem-Security Systems sales office. When the transporter arrives at the Arlington Facility, the manifest(s) and other shipping paper(s) must be presented to the site receiving clerk for verification.

##### **4.1 WHEN TO USE THE CONTINUATION SHEET**

The continuation sheet must be used if:

- o More than two transporters are used to transport the waste, or;
- o More space is required for U.S. DOT description and related information in Section 11 of the manifest.

##### **4.2 GENERATOR SUPPLIED INFORMATION REQUIRED ON MANIFESTS**

To meet all the applicable current regulations on manifesting of hazardous waste to the Arlington Facility, and to help us efficiently and speedily handle waste loads, the items described below are needed on a properly completed manifest. A sample completed manifest is shown in Exhibit 7c. States other than Oregon may require other information (see Exhibit 7d).

<u>Continuation</u>	<u>Manifest</u>
<u>Sheet</u>	<u>Section #</u>

- |         |          |  |
|---------|----------|--|
| 21      | 1        | Generator's EPA identification number and annually unique manifest document number (preprinted on CSSI supplied manifest forms, must be added on continuation form). |
| 22      | 2        | Number of pages used (manifest) and page number of this sheet (continuation sheet).  |
| 23      | 3-4      | Generator's name, mailing address (address where manifest records are kept), and telephone number. The continuation sheet requires name only.                        |
| 24-27   | 5-8      | Name and EPA identification number of each transporter. <span style="float: right;">SSN</span>   |
| 0 and Q | D and F  | Phone number of each transporter.  |
| None    | 9, 10, H | Name, address, EPA identification number, and phone number of the designated disposal facility (preprinted on manifests and continuation sheets provided by CSSI).   |
| 28      | 11       | DOT proper shipping name, hazard class, identification number (49 CFR Parts 172.101, 172.202, and 172.203); and,   |
|         | a.       | Designation of whether the waste is hazardous material (check "HM" column), or   |
|         | b.       | Designation, if the waste is a hazardous substance (write "RQ" instead of a check in the "HM" column) and listing of the   |

)

constituent making the waste a hazardous substance after the proper shipping name, if it is not part of the proper shipping name.

- 29           12         Enter the number of containers for each waste and the appropriate abbreviation from the table below for type of container.

DM = Metal drums, barrels, kegs

DW = Wooden drums, barrels, kegs

DF = Fiberboard or plastic drums, barrels, kegs

TP = Tanks portable

TT = Cargo tanks (tank trucks).

TC = Tank cars

DT = Dump truck

CY = Cylinders

CM = Metal boxes, cartons, cases (including roll-offs)

CW = Wooden boxes, cartons, cases

CF = Fiber or plastic boxes, cartons, cases

BA = Burlap, cloth, paper, or plastic bags

- 30-31       13-14      Enter the total quantity of waste at 13 and the unit of measure abbreviation from the table below at 14. The quantity should be as precise as possible.

G = Gallons (liquids only)

P = Pounds

T = Tons (2,000 pounds)

Y = Cubic yards

L = Liters (liquids only)

K = Kilograms

M = Metric tons (1,000 kg)

N = Cubic meters

R	I	EPA waste number (if the waste is hazardous under RCRA).
S	J	Oregon Department of Environmental Quality's approved waste description, per Generator's Waste Profile Sheet description - "Waste Name" and physical state.
32	15	Please enter Waste Profile Sheet number(s) here. If an alternate facility is designated, information and identification number must appear here. Generators may use this space to indicate special transportation treatment, storage or disposal information.
None	16	Generator's Certification. Generator must read, sign by hand, and date this section. Please include this person's title along with printed/typed name in the space provided.

For each lab pack drum, an itemized list of each waste container placed in the drum showing waste description and volume, must be stapled to the manifest. This list should be readily identifiable with a specific drum through a drum numbering or other system.

For certain PCB wastes, the following additional information is required:

- o For any PCB article, the date each item was placed in storage for disposal should be written in Section 15 (this date must also appear on the article container).
- o For each less than 500 ppm PCB liquid container or transformer waste write in PCB concentration on the manifest in Section 15, and staple to the manifest a lab analysis signed by a qualified analyst.
- o For drained and flushed transformers, a statement that each unit was drained and flushed in accordance with 40 CFR 761 must be signed by a responsible representative of the generator and stapled to the manifest.

- o For full transformers or empty ones requiring flushing at Arlington, if it is not possible for the generator to determine the exact gallonage of PCB transformers, a designation of "estimated" volume should be stated on the manifest.
- o For each container of PCB capacitors a list of manufacturer name, serial number, and KVAR for each capacitor inside must be stapled to the manifest.

#### 4.3 TRANSPORTATION INFORMATION

<u>Continuation Sheet #</u>	<u>Manifest Section #</u>	
33-34	17-18	Enter the name of the person accepting on behalf of the transporter. That person must sign, acknowledging acceptance of the waste. Use 17 for first transporter, 18 for second, and use continuation sheet for additional transporters.

#### 4.4 TSD SUPPLIED INFORMATION

<u>Continuation Sheet Section #</u>	<u>Manifest Section #</u>	
35	19	The authorized representative of the designated facility must note in this space any significant discrepancy between waste described and waste actually received (see Section 9.1).
None	20	The person accepting waste on behalf of the facility must acknowledge acceptance of the waste by signing and entering date of receipt.

TOLS004439

#### 4.5 MANIFEST COPIES

The manifest consists of at least the number of copies which will provide the generator, each transporter, and the Arlington Facility with one copy for their records and an additional copy to be returned to the generator. On CSSI pre-printed manifest forms the use of each copy is designated at the bottom center. After the first transporter signs the manifest, the generator keeps one copy of the manifest and the remaining copies and the original remain with the transporter to accompany the shipment to the disposal facility or to another transporter or treater.

A signed copy of the manifest for loads of waste accepted at the Arlington Facility will be returned to the generator attached to the invoice for the waste shipment.

#### 4.6 UNMANIFESTED WASTES

Wastes that arrive at the facility without manifests or approved Waste Profile Sheets may be returned to the generator as required under 40 CFR Part 262, State of Oregon requirements, and compliance policy.

TOLS004440

-15a-

32319

BZTO104(e)041261

HEM-SECURITY SYSTEMS, INC.

EXHIBIT 7a

NATIONAL RESPONSE CENTER 1-800-424-8802  
OREGON ACCIDENT RESPONSE CENTER 1-800-452-0311

Form Approved Date No. 2000-0404 Expiration 7-31-01

UNIFORM HAZARDOUS  
WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of	Information in the shaded areas is not required by Federal law		
3. Generator's Name and Mailing Address		A. State Manifest Document Number			
4. Generator's Phone ( )		B. State Generator's ID			
5. Transporter 1 Company Name		US EPA ID Number	C. State Transporter's ID		
7. Transporter 2 Company Name		US EPA ID Number	D. Transporter's Phone		
9. Designated Facility Name and Site Address		10. US EPA ID Number	E. State Transporter's ID		
Chem-Security Systems, Inc. Star Route Arlington, Oregon 97312		ORD 089 452 353	F. Transporter's Phone		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	EPA/I. Waste No.
a.					
b.					
c.					
d.					
13. Special Handling Instructions and Additional Information - Waste Profile Sheet Number(s)			14. Handling Codes for Wastes Listed Above		
a.					
b.					
c.					
d.					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.					
Printed/Typed Name		Signature		Date	
				Month	Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Date	
				Month	Day Year
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Date	
				Month	Day Year
19. Discrepancy Indication Space					
TOLS004441					
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name		Signature		Date	
32319				Month	Day Year

CHEM-SECURITY SYSTEMS, INC

## EXHIBIT 7D

Form Approved Date 04/01/2000 7-31-94

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b> <i>(Continuation Sheet)</i>		21. Generator's US EPA ID No.	Monitor Document No.	22. Page	Information in the shaded areas is not required by Federal law.		
23. Generator's Name				24. State Manifest Document Number			
24. Transporter Company Name		25. US EPA ID Number			26. State Generator's ID		
26. Transporter Company Name		27. US EPA ID Number			27. State Transporter's ID		
28. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) <i>(Item)</i>		29. Containers No	Type	30. Total Quantity	31. Unit Wt/Vol	32. Waste No.	
a.							
b.							
c.							
d.							
e.							
f.							
g.							
h.							
i.							
33. Additional Descriptions for Materials Listed Above		34. Handling Codes for Wastes Listed Above					
a.		b.					
c.		d.					
35. Special Handling Instructions and Additional Information		Waste Profile Sheet Number(s)					
a.		b.		c.	d.	e.	
36. Transporter Acknowledgement of Receipt of Materials		Date					
Printed/Typed Name		Signature			Month	Day	Year
37. Transporter Acknowledgement of Receipt of Materials		Date					
Printed/Typed Name		Signature			Month	Day	Year
38. Discrepancy Indication Space							

32319

CHAM-SECURITY SYSTEMS, INC.

**EXHIBIT 7c**

NATIONAL RPS USE LENTIER 1-800-424-0801  
OREGON ACCIDENT RESPONSE CENTER 1-800-432-0311

Form Approved OMB No 2000-0472 Expiration 7-3-02

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. O.R.D.0.0.0.0.1.2.3.4.5   <b>01297</b>	Manifest Document No.	2 Page 1 of 1	Information in the shaded areas is not required by Federal law	
3. Generator's Name and Mailing Address <b>X Y Z COMPANY</b> <b>123 Main Street, Process, Oregon</b>					A. State Manifest Document Number	
4. Generator's Phone (503) 555-1234					B. State Generator's ID	
5. Transporter 1 Company Name <b>CHEM-SECURITY SYSTEMS, INC.</b>	6. US EPA ID Number <b>O.R.D.0.8.9.4.5.2.3.5.3</b>					C. State Transporter's ID
7. Transporter 2 Company Name	8. US EPA ID Number					D. Transporter's Phone <b>503/454-2643</b>
9. Designated Facility Name and Site Address <b>Chem-Security Systems, Inc.</b> <b>Star Route</b> <b>Arlington, Oregon 97812</b>	10. US EPA ID Number <b>ORD 089 452 353</b>					E. State Transporter's ID
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) HMI		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	EPA/I. Waste No.	
a. RQ	Waste Hydrofluoric acid solution corrosive material UN 1790	0 0 1 TT	3 0 0 0	G	D002	
b.						
c.						
d.						
J. Additional Descriptions for Materials Listed Above a. Hydrofluoric Acid Etchant waste, liquid		K. Handling Codes for Waste Listed Above				
13. Special Handling Instructions and Additional Information Waste Profile Sheet Number(s) a. D85311 b. c. d.						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are distilled, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.						
Printed/Typed Name John Jones		Signature		Date	Month Day Year .9 2 0 8 4	
17. Transporter 1 Acknowledgement of Receipt of Materials						
Printed/Typed Name Robert Smith		Signature		Date	Month Day Year .9 2 0 8 4	
18. Transporter 2 Acknowledgement of Receipt of Materials						
Printed/Typed Name		Signature		Date	Month Day Year . . . .	

TOLS004443

20. Facility Owner or Operator Certification of compliance of hazardous materials covered by the manifest except as noted in Item 19.

Printed/Typed Name 32319 Signature \_\_\_\_\_ Date \_\_\_\_\_  
Month Day Year \_\_\_\_\_

卷之三

-34c-

ORIGINAL PETITION TO SENATE

BZTO104(e)041264



RECEIVED  
MAY 22 1986

May 21, 1986

John Ruddick  
Century Environmental Sciences  
One S. W. Columbia, Suite 1222  
Portland, OR 97258

Dear John:

Here are the Penta results from Time oil:

CES #	Pentachlorophenol conc. ug/l (ppb)
WP-B	2.6
MW-4"	6.1
WP-E	<1.0
WP-F	1.4

If you have any questions, please phone.

Sincerely,

CENTURY TESTING LABORATORIES, INC.

*Walter F. Burns*

Walter F. Burns  
Organic Chemistry Supervisor

WFB:lk

TOLS004444

P.O. BOX 1174 • BEND, OR 97709 • (503) 382-6432  
Water • Feed • Soils • Construction Materials • General Analytical Services.

32319

BZTO104(e)041265

Property No.: 03-123 Name and Address: NW Terminal  
Sampler: Erad Proby 12005 N Burgard  
Date and Time: 5/9/86 1300 Portland, OR

ITEM	SAMPLE NUMBER	DESCRIPTION	ITEM	SAMPLE NUMBER	DESCRIPTION
1	<u>03-123-4A</u>	<u>Well #1 water</u>	11		
2	<u>03-123-4B</u>	<u>Well #1 water (diluted)</u>	12		
3			13		
4			14		
5			15		
6			16		
7			17		
8			18		
9			19		
10			20		

Sample Collection and Preservation: Pure 3 vols (35-41) sample w/ Soil r  
4.2+ in refrigerator until picked up by Century Envir. Sci.

Laboratory Name and Address: (c/o Century Envir. Sci.)

Phone No.: ( )

Instructions for Analysis: Pentachlorophenol (<10 ppb)

P.O. No.: \_\_\_\_\_

CHAIN OF CUSTODY RECORD

Erad Proby

Relinquished By

TOC - NW Terminal

Received By

5/9/86 1330

Date & Time

Relinquished By

Received By

Date & Time

Relinquished By

Received for Laboratory By

Date & Time

TO BE FILLED OUT BY LABORATORY:

Sample ID Numbers: \_\_\_\_\_

Person Performing Analysis: \_\_\_\_\_

Analysis Date: \_\_\_\_\_

Methods Used: \_\_\_\_\_

Final Disposition of Samples: \_\_\_\_\_

X IMPORTANT: Return original completed Sample Log and analysis results to Time Oil Co.  
2737 W. Commodore Way, Seattle, WA 98199 Attention: John P. Denham, Environmental  
Manager (206)285-2400

TOLS004445

2319

BZTO104(e)041266

# Century Environmental Sciences

June 4, 1986

Mr. John Denham  
Time Oil Company  
2737 W. Commodore Way  
Seattle, Washington 98199

Dear Mr. Denham:

Century Environmental Sciences (Century) is pleased to transmit herein to Time Oil Company (Time) the results of chemical analyses performed on groundwater samples obtained from the Portland facility.

## BACKGROUND

In early 1986 Time installed a monitoring well network at this facility. Subsequently, Time retained Century to measure static water levels, purge the wells and obtain groundwater samples using EPA approved sampling protocols, and analyze the samples. The results of this investigation are discussed below.

## FIELD ACTIVITIES

Prior to monitoring well purging and groundwater sampling, Century obtained static water level measurements in the Time monitoring wells. These measurements were performed in accordance with EPA approved procedures.

The following results are identified by the letter designation of the well preceeded by either MW (monitoring well) or WP (well point):

## RESULTS

<u>WELL NO.</u>	<u>STATIC WATER LEVEL (FEET BELOW TOP OF CASING)</u>
WP-A	13.65
WP-B	13.70
WP-C	8.90 (Filled with sand to 9.20 ft.)
WP-E	12.90
WP-F	13.00
WP-G	Dry
MW-4	18.98

TOLS004446

-1-

One S.W. Columbia Street Suite 1222 Portland, Oregon 97258 Phone (503) 224-4334  
Century Environmental Sciences Century West Engineering Corporation Century Testing Laboratories, Inc. Century West Development Services  
Portland and Bend, Oregon Spokane and Pasco, Washington Bozeman, Montana

32319

BZTO104(e)041267

Century Testing Laboratories (CTL) provided Century with appropriately preserved sample containers. Three well volumes of water were removed from each well and well point prior to sampling so that native aquifer groundwater was sampled as opposed to standing well water. In order to purge the wells and well points, a temporary water treatment system was designed to dispose of the purged groundwater. Essentially, this system involved partially filling a 55-gallon drum with 75-pounds of activated charcoal. Activated charcoal has been proven to be very effective in treatment of Penta contaminated groundwater. A discharge hose was attached to the bottom of the 55-gallon drum and the pre-treated groundwater was directed to the sanitary sewer. A pump was utilized to purge the four-inch monitoring well. Groundwater was discharged directly from the pump line into the treatment drum. The remaining wells were either pumped using a small, nitrogen activated sampling pump (for the 2-inch well points), or bailed using a 3/4-inch outside diameter (OD) 39-inch long stainless steel bailer. Groundwater from the smaller pump and bailer was discharged temporarily into a 5-gallon bucket and subsequently poured into the treatment barrel. After each well that contained groundwater was purged and the static water level was allowed to recover to near its original level, the samples were obtained. The pumps and bailer were steam cleaned between wells following sampling.

Dates, times and locations of sampling were documented on the sample containers, on a field log form and on the sample chain of custody form. Samples were immediately chilled after they were obtained, packed and shipped to CTL on the last day of sampling. Chain of custody documentation accompanied the samples. The chain of custody form documents each individual who was in possession of the sample from the time they were obtained to the time they arrived in the lab. Chain of custody aids in tracking sample possession and assures that the samples were not tampered with enroute from the field to the lab.

<u>WELL NO.</u>	<u>PENTACHLOROPHENOL CONCENTRATION</u> (in ug/l or ppb)
WP-B	2.6
WP-E	<1.0
WP-F	1.4
MW-4	6.1

TOLS004447

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BZTO104(e)041268

Attachment 1 contains the laboratory report for this investigation. Analytical method 8270 described in the EPA publication SW-846 ("Test Methods for Evaluating Solid Waste") was utilized to analyze the Time groundwater samples for penta concentration. This method is equivalent to EPA method 625.

Century appreciates the opportunity to complete this work for Time. If you have any questions or comments regarding the data enclosed herein, please do not hesitate to call me.

Yours truly,  
CENTURY ENVIRONMENTAL SCIENCES

*Samuel R. Rothermel*

Sam Rothermel  
Environmental Engineer, Hydrogeologist

SR/js

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**ATTACHMENT I**

**GROUNDWATER ANALYTICAL RESULTS**

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TOLS004449

BZTO104(e)041270

# Century Environmental Sciences

July 7 , 1986

Mr. John Denham  
Time Oil Company  
2737 W. Commodore Way  
Seattle, Washington 98199

Dear John:

Attached is a copy of the report of field sampling and analytical results for groundwater samples taken at the north Portland terminal. The only detectable concentrations of pentachlorophenol in groundwater was at Well "I" located to the west of the warehouse building. The pH of the groundwater at this site was 5.74.

According to comments made in the Tuesday, March 11, 1986, Federal Register, Volume 51, No. 47, Page 8361, the EPA has proposed water quality criteria for pentachlorophenol. The criteria for fresh water aquatic life for pentachlorophenol indicates that the four day average concentration in parts per billion of pentachlorophenol which should not unacceptably affect fresh water aquatic organisms and their uses, may be calculated by an equation based on the pH of the groundwater. A second equation is given to determine the no-effect concentrations for one hour average values as well.

Based on these equations, the four day average concentration at pH 5.74 is 1.49 parts per billion. The one hour average concentration limit is 2.36 parts per billion. On this basis, the detected concentration in Well "I" is below the one hour average concentration limit cited above. The one hour concentration limit rather than the four day average limit is appropriate since this Well "I" value of 2.2 ppb is a single sample result.

I hope the information provided in this report is helpful to you. Should you have any comments or questions, please don't hesitate to contact me.

Sincerely,  
CENTURY ENVIRONMENTAL SCIENCES  
  
John Ruddick  
Manager/Senior Scientist

Enclosure

TOLS004450

One S.W. Columbia Street Suite 1222 Portland, Oregon 97258 Phone (503) 224-4334  
Century Environmental Sciences Century West Engineering Corporation Century Testing Laboratories, Inc. Century West Development Services  
Portland and Bend, Oregon Spokane and Pasco, Washington Bozeman, Montana

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BZTO104(e)041271

**TIME OIL CO.**  
**SUMMARY OF FIELD AND ANALYTICAL RESULTS**  
**GROUNDWATER SAMPLING AND ANALYSIS**

Sampling procedures meet EPA Pub. SW846.  
 Time Oil groundwater samples were analyzed by GC/MS using EPA Method.  
 The submitted sample from well No. 4 contained an insufficient amount of material for analysis.

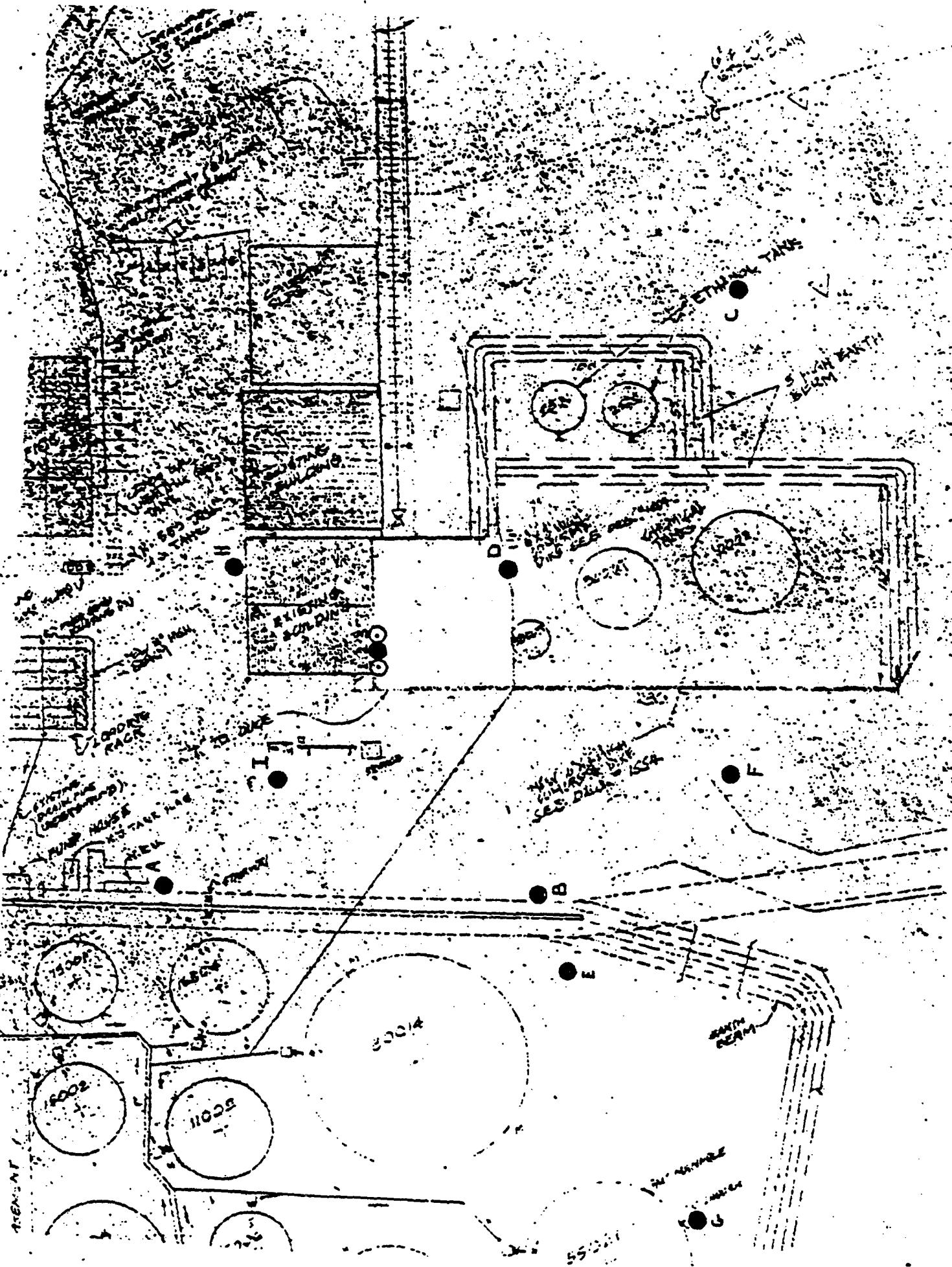
WELL NO.	STATIC WATER LEVEL (FEET) (5-28-86)	FIELD Ph	PENTACHLOROPHENOL mg/L (ppm) (1)	STATIC WATER LEVEL (6-5-86)
A	13.17	6.56	N.D.	12.15
B	13.16	6.29	N.D.	13.18
D	12.52	6.49	N.D.	12.65
E	13.65	7.70	N.D.	13.75
F	13.90	6.73	N.D.	13.93
H	9.31	6.32	N.D.	9.46
I	12.89	5.74	.0022	13.02
QA/QC (Duplicate B)			N.D.	
Field Blank			N.D.	
2	15.00			15.11
River	18.52			14.54

NOTE: (1) Samples collected on May 28, 1986;  
 Laboratory analysis reported on June 9, 1986.  
 Detection Limit of 002 ppm.

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TOLS004451

BZTO104(e)041272



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TOLS004452

BZTO104(e)041273

**Regulatory Flexibility Analysis**

Pursuant to the Regulatory Flexibility Act of 1980 (5 U.S.C. 601, et seq.) each agency, when required by 5 U.S.C. 553 to publish a proposed rule, is further required to prepare and make available for public comment an initial regulatory flexibility analysis to describe the impact of the proposed rule on small entities. In this instance, the proposal relates to nonregulatory services provided by Western. Under 5 U.S.C. 601(2), a proposal with particular applicability is not considered "a rule" within the meaning the Act. Since this proposal is of limited applicability and is being set in accordance with specific regulations and legislation under particular circumstances, Western believes that no flexibility analysis is required.

**Determination Under Executive Order 12291**

The Department of Energy has determined that this is not a major rule because it does not meet the criteria of section 1(b) of Executive Order 12291. 46 FR 13193 (February 19, 1981). Western has an exemption from sections 3, 4, and 7 of Executive Order 12291.

Issued at Golden, Colorado, February 24, 1986.

William H. Clagett,  
Administrator.

[FR Doc. 86-4717 Filed 3-10-86; 8:45 am]  
BILLING CODE 6450-01-01

**ENVIRONMENTAL PROTECTION AGENCY**

[OW-FRL-2981-8]

**Management Advisory Group Meeting**

Under Pub. L. 92-463, notice is hereby given that a one and a half day meeting of the Management Advisory Group to the EPA Construction Grant Program (MAG) will be held on March 26-27, 1986, in Washington, DC, at EPA Headquarters, 401 M Street SW., Washington, DC 20460. The meeting room will be Conference Room 2 at the EPA Washington Information Center located on the ground floor of the Waterside Mall area. The time of the meeting will be 9 a.m. to 5 p.m. on March 26, and 8 a.m. to 1 p.m. on March 27.

The principal agenda item will be work on a MAG report on compliance and operation and maintenance of publicly owned wastewater treatment works, specifically on recommendations to be made by MAG. The agenda will also include briefings and discussions on other topics of current or future

interest to MAG. Any member of the public wishing to make comments is invited to submit them in writing to the Executive Secretary at the meeting.

The meeting will be open to the public. For additional information, contact Georgette Brown at (202) 382-5859.

Dated: March 3, 1986.

Edwin L. Johnson,

*Assistant Administrator for Water.*

[FR Doc. 86-5243 Filed 3-10-86; 8:45 am]  
BILLING CODE 6450-01-01

[OW-FRL-2981-4]

**Water Quality Criteria; Ambient Aquatic Life Water Quality Criteria Documents**

**AGENCY:** Environmental Protection Agency.

**ACTION:** Notice of request for comments on ambient aquatic life water quality criteria documents.

**SUMMARY:** EPA announces the availability for public comment, and provides summaries of four ambient aquatic life water quality criteria documents. When published in final form after the review of public comments, these water quality criteria may form the basis for enforceable standards. These criteria are published pursuant to section 304(a)(1) of the Clean Water Act.

**DATE:** Written comments should be submitted to the person listed directly below by May 12, 1986.

**FOR FURTHER INFORMATION CONTACT:** Dr. Frank Gostomski, Criteria and Standards Division (WH-585), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460. (202) 245-3030.

**Availability of Documents**

This notice contains summaries of four documents containing proposed ambient water quality criteria for the protection of aquatic life and its uses. Copies of the complete criteria documents may be obtained upon request from the person listed above. These documents are also available for public inspection and copying during normal business hours at: Public Information Reference Unit, U.S. Environmental Protection Agency, Room 2404 (rear), 401 M St. SW., Washington, DC 20460. As provided in 40 CFR Part 2, a reasonable fee may be charged for copying services. Copies of these documents are also available for review in the EPA Regional Office libraries. A list of the proposed documents is presented below:

1. Ambient Water Quality Criteria for Aluminum.
2. Ambient Water Quality Criteria for Chlorpyrifos.
3. Ambient Water Quality Criteria for Nickel.
4. Ambient Water Quality Criteria for Pentachlorophenol.

**SUPPLEMENTARY INFORMATION:****Background**

Section 304(a)(1) of the Clean Water Act (33 U.S.C. 1314(a)(1)) requires EPA to publish and periodically update ambient water quality criteria. These criteria are to reflect the latest scientific knowledge on the identifiable effects of pollutants on public health and welfare, aquatic life, and recreation.

EPA has periodically issued ambient water quality criteria beginning in 1973 with the publication of the "Blue Book" (Water Quality Criteria 1972). In 1978, the "Red Book" (Quality Criteria for Water) was published. On November 28, 1980 (45 FR 79318), EPA announced the publication of 64 individual ambient water quality criteria documents for pollutants listed as toxic under section 307(a)(1) of the Clean Water Act. A document addressing 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) was announced on February 15, 1984 (FR 49 5831) completing the coverage of the 65 priority pollutants listed in 307(a)(1). Nine ambient water quality documents, including revision of seven of the 1980 documents, were released on July 29, 1985 (50 FR 30784).

Today EPA is announcing the availability for comment four proposed individual ambient aquatic life water quality criteria documents. Two of the documents, nickel and pentachlorophenol, upon final publication, will update and revise appropriate sections of the 1980 criteria documents. The other two, aluminum and chlorpyrifos, will address chemicals which have not been covered before.

The documents announced today will not contain information on the effects of these pollutants on human health. EPA anticipates the release of water quality advisories on aluminum and chlorpyrifos to specifically address human health concerns. Advisories will also be issued to update the human health section of the 1980 ambient water quality criteria documents for nickel and pentachlorophenol if a review of the available information indicate that such a revision is necessary. Both the criteria documents announced today and the water quality advisories addressing human health may form the basis for enforceable standards, when published in final form.

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TOLS004453

**TIME OIL CO.**  
**SUMMARY OF FIELD AND ANALYTICAL RESULTS**  
**GROUNDWATER SAMPLING AND ANALYSIS**

Sampling procedures meet EPA Pub. SW846.  
 Time Oil groundwater samples were analyzed by GC/MS using EPA Method.  
 The submitted sample from well No. 4 contained an insufficient amount of material for analysis.

Ref Elev	WT Elev	WELL NO.	STATIC WATER LEVEL (FEET) (5-28-86)	FIELD Ph	PENTACHLOROPHENOL mg/L (ppm) (1)	STATIC WATER LEVEL (6-5-86)	WT Elev
77.14	A	83.97	13.17	6.56	N.D.	12.15	84.99
86.83	B	83.67	13.16	6.29	N.D.	13.18	83.65
97.93	D	85.41	12.52	6.49	N.D.	12.65	85.28
97.83	E	87.18	13.65	7.70	N.D.	13.75	84.08
77.97	F	84.07	13.90	6.73	N.D.	13.93	84.04
94.75	H	85.44	9.31	6.32	N.D.	9.46	85.29
98.00	I	85.11	12.89	5.74	.0022	13.02	84.98
		QA/QC (Duplicate B)			N.D.		
		Field Blank			N.D.		
		2	15.00			15.11	
96.30	River	77.58	18.52		-	14.54	81.76

NOTE: (1) Samples collected on May 28, 1986;  
 Laboratory analysis reported on June 9, 1986.  
 Detection Limit of 002 ppm.

TOLS004454

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BZTO104(e)041275

interest to MAG. Any member of the public wishing to make comments is invited to submit them in writing to the Executive Secretary at the meeting.

The meeting will be open to the public. For additional information, contact Georgette Brown at (202) 382-5858.

Dated: March 5, 1986.

Edwin L. Johnson,

Assistant Administrator for Water.

[FR Doc. 86-5243 Filed 3-10-86; 8:45 am]

BILLING CODE 6560-00-00

**[OW-FRL-2881-4]**

**Water Quality Criteria; Ambient Aquatic Life Water Quality Criteria Documents**

**AGENCY:** Environmental Protection Agency.

**ACTION:** Notice of request for comments on ambient aquatic life water quality criteria documents.

**SUMMARY:** EPA announces the availability for public comment, and provides summaries of four ambient aquatic life water quality criteria documents. When published in final form after the review of public comments, these water quality criteria may form the basis for enforceable standards. These criteria are published pursuant to section 304(a)(1) of the Clean Water Act.

**DATE:** Written comments should be submitted to the person listed directly below by May 12, 1986.

**FOR FURTHER INFORMATION CONTACT:**  
Dr. Frank Costomski, Criteria and Standards Division (WH-585), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. (202) 245-3030.

**Availability of Documents**

This notice contains summaries of four documents containing proposed ambient water quality criteria for the protection of aquatic life and its uses. Copies of the complete criteria documents may be obtained upon request from the person listed above. These documents are also available for public inspection and copying during normal business hours at Public Information Reference Unit, U.S. Environmental Protection Agency, Room 2404 (rear), 401 M St., SW, Washington, DC 20460. As provided in 40 CFR Part 2, a reasonable fee may be charged for copying services. Copies of these documents are also available for review in the EPA Regional Office libraries. A list of the proposed documents is presented below:

1. Ambient Water Quality Criteria for Aluminum.
2. Ambient Water Quality Criteria for Chlorpyrifos.
3. Ambient Water Quality Criteria for Nickel.
4. Ambient Water Quality Criteria for Pentachlorophenol.

**SUPPLEMENTARY INFORMATION**

**Background**

Section 304(a)(1) of the Clean Water Act (33 U.S.C. 1314(a)(1)) requires EPA to publish and periodically update ambient water quality criteria. These criteria are to reflect the latest scientific knowledge on the identifiable effects of pollutants on public health and welfare, aquatic life, and recreation.

EPA has periodically issued ambient water quality criteria beginning in 1973 with the publication of the "Blue Book" (Water Quality Criteria 1972). In 1978, the "Red Book" (Quality Criteria for Water) was published. On November 28, 1980 (45 FR 79318), EPA announced the publication of 64 individual ambient water quality criteria documents for pollutants listed as toxic under section 307(a)(1) of the Clean Water Act. A document addressing 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) was announced on February 15, 1984 (FR 49 5831) completing the coverage of the 65 priority pollutants listed in 307(a)(1). Nine ambient water quality documents, including revision of seven of the 1980 documents, were released on July 29, 1985 (50 FR 30784).

Today EPA is announcing the availability for comment four proposed individual ambient aquatic life water quality criteria documents. Two of the documents, nickel and pentachlorophenol, upon final publication, will update and revise appropriate sections of the 1980 criteria documents. The other two, aluminum and chlorpyrifos, will address chemicals which have not been covered before.

The documents announced today will not contain information on the effects of these pollutants on human health. EPA anticipates the release of water quality advisories on aluminum and chlorpyrifos to specifically address human health concerns. Advisories will also be issued to update the human health section of the 1980 ambient water quality criteria documents for nickel and pentachlorophenol if a review of the available information indicate that such a revision is necessary. Both the criteria documents announced today and the water quality advisories addressing human health may form the basis for enforceable standards, when published in final form.

TOLS004455

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established if adequate justifications is provided.

Use of criteria for developing water quality-based permit limits and for designing waste treatment facilities requires selection of an appropriate wasteload allocation model. Dynamic models are preferred for the application of these criteria. Limited data or other considerations might make their use impractical, in which case one must rely on a steady-state model. The Agency recommends the interim use of 1Q5 or 1Q10 for the Criterion Maximum Concentration (CMC) design flow and 7Q5 or 7Q10 for the Criterion Continuous Concentration (CCC) design flow in steady-state model for unstressed and stressed systems respectively. These matters are discussed in more detail in the Technical Support Document for Water Quality-Based Toxics Control (U.S. EPA, 1985).

*Saltwater Aquatic Life.* Saltwater aquatic organisms and their uses should not be affected unacceptably, except possibly where a locally important species is very sensitive, if the four-day average concentration of nickel does not exceed 7.9 µg/L more than once every three years on the average, and if the one-hour average concentration of nickel does not exceed 71 µg/L more than once every three years on the average.

EPA recommends applying the criteria for metals using the total recoverable method until a protocol for the measurement of "acid-soluble" metals is approved.

The allowed average excursion frequency of three years is the Agency's best scientific judgement of the amount of time it will take an unstressed system to recover from a pollution event in which exposure to these pollutants exceeds the criteria. Stressed systems, for example one in which several outfalls occur in a limited area, would be expected to require more time for recovery. The resilience of ecosystems and their ability to recover differ greatly, however, and site-specific excursion frequencies may be established if adequate justification is provided.

Use of criteria for developing water quality-based permit limits and for designing waste treatment facilities requires selection of an appropriate wasteload allocation model. Dynamic models are preferred for the application of these criteria. Limited data or other considerations might make their use

impractical, in which case one must rely on a steady-state model. The Agency recommends the interim use of 1Q5 or 1Q10 for the Criterion Maximum Concentration (CMC) design flow and 7Q5 or 7Q10 for the Criterion Continuous Concentration (CCC) design flow in steady-state model for unstressed and stressed systems respectively. These matters are discussed in more detail in the Technical Support Document for Water Quality-Based Toxics Control (U.S. EPA, 1985).

#### 4. Pentachlorophenol

*Freshwater Aquatic Life.* Freshwater aquatic organisms and their uses should not be affected unacceptably, except possibly where a locally important species is very sensitive, if the four-day average concentration (in µg/L) of pentachlorophenol does not exceed the numerical value given by  $\{1.005[\text{pH}] - 5.368\}$  more than once every three years on the average, and if the one-hour average concentration (in µg/L) does not exceed the numerical value given by  $\{1.005[\text{pH}] - 4.308\}$  more than once every three years on the average. For example, at pH = 6.5, 7.8, and 9.0, the four-day average concentrations of pentachlorophenol are 3.2, 12 and 40 µg/L respectively, and the one-hour average concentrations are 5.1, 19 and 63 µg/L.

The allowed average excursion frequency of three years is the Agency's best scientific judgement of the amount of time it will take an unstressed system to recover from a pollution event in which exposure to these pollutants exceeds the criteria. Stressed systems, for example one in which several outfalls occur in a limited area, would be expected to require more time for recovery. The resilience of ecosystems and their ability to recover differ greatly, however, and site-specific excursion frequencies may be established if adequate justification is provided.

Use of criteria for developing water quality-based permit limits and for designing waste treatment facilities requires selection of an appropriate wasteload allocation model. Dynamic models are preferred for the application of these criteria. Limited data or other considerations might make their use impractical, in which case one must rely on a steady-state model. The Agency recommends the interim use of 1Q5 or 1Q10 for the Criterion Maximum Concentration (CMC) design flow and 7Q5 or 7Q10 for the Criterion Continuous Concentration (CCC) design flow in steady-state model for unstressed and stressed systems respectively. These matters are discussed in more detail in the Technical Support Document for Water Quality-Based Toxics Control (U.S. EPA, 1985).

Concentration (CMC) design flow and 7Q5 or 7Q10 for the Criterion Continuous Concentration (CCC) design flow in steady-state model for unstressed and stressed systems respectively. These matters are discussed in more detail in the Technical Support Document for Water Quality-Based Toxics Control (U.S. EPA, 1985).

*Saltwater Aquatic Life.* Saltwater aquatic organisms and their uses should not be affected unacceptably, except possibly where a locally important species is very sensitive, if the four-day average concentration of pentachlorophenol does not exceed 8.1 µg/L more than once every three years on the average, and if the one-hour average concentration does not exceed 13 µg/L more than once every three years on the average.

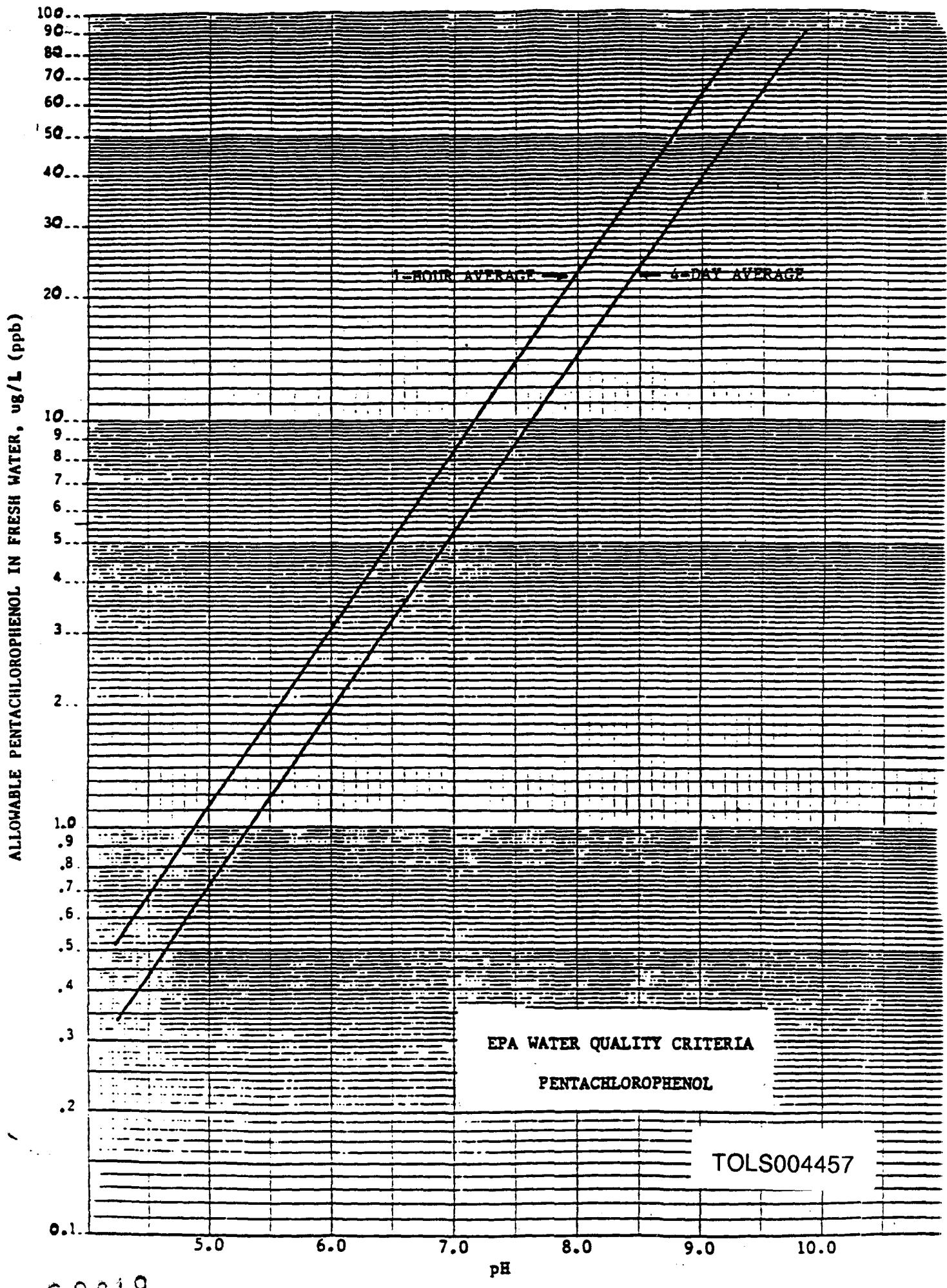
The allowed average excursion frequency of three years is the Agency's best scientific judgement of the amount of time it will take an unstressed system to recover from a pollution event in which exposure to these pollutants exceeds the criteria. Stressed systems, for example one in which several outfalls occur in a limited area, would be expected to require more time for recovery. The resilience of ecosystems and their ability to recover differ greatly, however, and site-specific excursion frequencies may be established if adequate justification is provided.

Use of criteria for developing water quality-based permit limits and for designing waste treatment facilities requires selection of an appropriate wasteload allocation model. Dynamic models are preferred for the application of these criteria. Limited data or other considerations might make their use impractical, in which case one must rely on a steady-state model. The Agency recommends the interim use of 1Q5 or 1Q10 for the Criterion Maximum Concentration (CMC) design flow and 7Q5 or 7Q10 for the Criterion Continuous Concentration (CCC) design flow in steady-state model for unstressed and stressed systems respectively. These matters are discussed in more detail in the Technical Support Document for Water Quality-Based Toxics Control (U.S. EPA, 1985).

[FR Doc. 86-5181 Filed 3-10-86; 8:45 am]  
BILLING CODE 6420-04-4

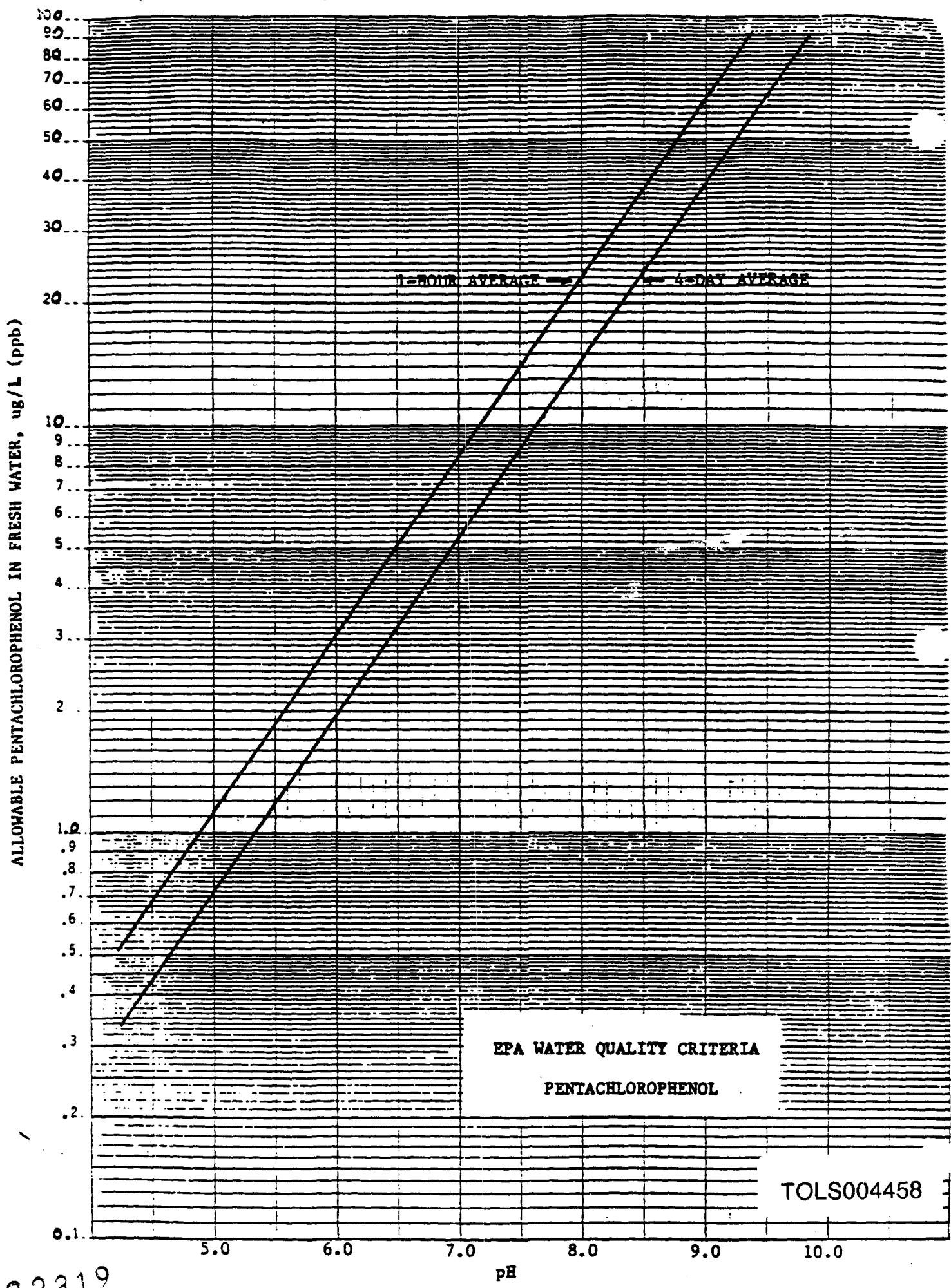
TOLS004456

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BZTO104(e)041278



BZTO104(e)041279

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

International Paper Company  
Long Bell Division  
Weed, CA 96094

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

The Woodtox 140 Bulk RTU that has been shipped from Richmond was blended several months before the rapid escalation of raw material cost and we were able to sell this product to you at a much lower price than our present charge from the Portland location.

Our price on Woodtox 140 RTU Bulk, FOB Portland is \$0.70/gal., price in effect at time of shipment. Freight rates are in the process of being calculated and we will advise upon placement of an order. This we believe, will be better because of the constant change in freight rate charges. Shipment will be by Truck and Trailer since we do not have tank cars on lease in this area.

If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004459

JMM/pa

BZTO104(e)041280

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

Mr. Max Anthony, President  
Jasco Chemical Company  
1090 Terra Bella Avenue  
Mountain View, CA 94040

Dear Mr. Anthony:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

The Woodtox 140 Bulk RTU that has been shipped from Richmond was blended several months before the rapid escalation of raw material cost and we were able to sell this product to you at a much lower price than our present charge from the Portland location.

Our price on Woodtox 140 RTU Bulk, FOB Portland is \$0.70/gal., price in effect at time of shipment. Freight rates are in the process of being calculated and we will advise upon placement of an order. This we believe, will be better because of the constant change in freight rate charges. Shipment will be by Truck and Trailer since we do not have tank cars on lease in this area.

If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004460

JMM/pa

BZTO104(e)041281

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

Jeld Wen Company  
P.O. Box 1016  
Flagstaff, AZ 86001

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

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Our price on Woodtox 140 RTU Bulk, FOB Portland is \$0.70/gal., price in effect at time of shipment. Freight rates are in the process of being calculated and we will advise upon placement of an order. This we believe, will be better because of the constant change in freight rate charges. Shipment will be by Truck and Trailer since we do not have tank cars on lease in this area.

If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004461

JMM/pa

BZTO104(e)041282

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

Auburn Millworks  
P.O. Box 751  
Auburn, CA 95603

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

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Our price on Woodtox 140 RTU Bulk, FOB Portland is \$0.70/gal., price in effect at time of shipment. Freight rates are in the process of being calculated and we will advise upon placement of an order. This we believe, will be better because of the constant change in freight rate charges. Shipment will be by Truck and Trailer since we do not have tank cars on lease in this area.

If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004462

JMM/pa

BZTO104(e)041283

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

B & F Box and Lumber Company  
10722 Reagan Street  
Los Alamitos, CA 90720

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

The Woodtox 140 Bulk RTU that has been shipped from Richmond was blended several months before the rapid escalation of raw material cost and we were able to sell this product to you at a much lower price than our present charge from the Portland location.

Our price on Woodtox 140 RTU Bulk, FOB Portland is \$0.70/gal., price in effect at time of shipment. Freight rates are in the process of being calculated and we will advise upon placement of an order. This we believe, will be better because of the constant change in freight rate charges. Shipment will be by Truck and Trailer since we do not have tank cars on lease in this area.

If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004463

JMM/pa

BZTO104(e)041284



# WOOD TREATING CHEMICALS

DEPARTMENT OF KOPPERS COMPANY, INC.

5137 SOUTHWEST AVENUE • ST. LOUIS, MISSOURI 63110 • 314-772-2200

## PRODUCT INFORMATION DATA

May 20, 1971

### WOODTOX

Trade Name	Penta Water Repellent Preservative
Wood Treating Name	Woodtox Pre-Prime
Chemical Name	5% pentachlorophenol in light petroleum solvent
Description	Clear, light amber colored solution
Penta Content	5.2% by weight technical pentachlorophenol meeting Federal Specification TT-W-570
Non-Volatile Content	12.7% by weight
Specific Gravity	0.8213 at 15.5° C. (typical)
Weight per Gallon	6.85 pounds at 15.5° C. (typical)
Pour Point	- 15° F.
Flash Point	Minimum 105° F. (Tag. Closed Cup) Typical 115° F. (Tag. Closed Cup)
Dilution Data	DO NOT DILUTE. This is a 5% ready-to-use solution.
Swellograph Efficiency	60% minimum
Paintability	Woodtox Pre-Prime has been specially formulated for minimum interference with paint primer and finish coatings applied at the factory or in the field. It dries to a hard film and contains a minimum of paraffin or other water repellent ingredients that tend to interfere with paintability. The length of time that should elapse between the time the wood is treated and the time that paint, varnish, or other finishes are applied, depends upon how soon the excess mineral spirits carrier used in the Woodtox Pre-Prime can get out of the wood. The mineral spirits carrier may be "trapped" when sash parts are bulk stacked or bundled too tightly and dip treated; doors or plywood flat stacked is another problem. However,

THE INFORMATION GIVEN HEREIN IS BASED ON OUR EXPERIENCE, REPRESENTS OUR BEST JUDGMENT IN THE MATTER, AND IS INTENDED TO BE HELPFUL; BUT WE CANNOT ASSUME RESPONSIBILITY FOR ANY LOSS OR ACCIDENT THAT MAY RESULT FROM ITS USE.

## WOODTOX PRE-PRIME

Paintability (cont'd.)	where there is free air circulation to volatilize the light solvent from the wood surfaces, Woodtox Pre-Prime open tank treated millwork, lumber or plywood can usually be finished within 48-72 hours after treatment. Woodtox Pre-Prime meets paintability tests or standards of Federal Specification TT-W-572B, NWMA, and CS 262-63.
Corrosion	Contains corrosion inhibitor to aid in the prevention of color formation in shipping containers or storage tanks, and to minimize corrosion and/or discoloration of metal fasteners.
Storage Precautions	None, other than to keep out water. Stable over the normal range of storage conditions.
Uses for Woodtox Pre-Prime	Woodtox Pre-Prime is used for the treatment of sash and other millwork to meet the Seal of Approval program of the National Woodwork Manufacturers Association for a preservative water repellent (Commercial Standard CS 262-63 effective 12/31/63). It is also useful for the treatment of other wood products where the benefits of a preservative and water repellent solution are desired that will help control stain, decay (rot), termites, and other wood boring insects; that will not cause grain raising; and that will leave the wood paintable.
Treating Data	Woodtox Pre-Prime may be applied by the vacuum, immersion, brush, or spray methods. The effectiveness of the treatment is in proportion to the distribution and retention of solution by the treated item.
Safe Handling of Pentachlorophenol Solutions	See Wood Treating Chemicals Co. Bulletin No. 1049 entitled, "Safety Measures & Precautions for Handling Solutions Containing Pentachlorophenol."
Packaging	Bulk - in 4,000 to 10,000 gal. tank cars; or in tank truck transports. 5 gal. and 55 gal. drums.
Shipping Classification	Chlorinated Phenol Petroleum Solution Wood Preservative Liquid, Not Exceeding 5% of Chlorinated Phenol By Weight.
Production Points and Shipping Points	St. Louis, Missouri; Portland, Oregon.

TOLS004465

Printed in U.S.A.



# WOOD TREATING CHEMICALS

DEPARTMENT OF KOPPERS COMPANY, INC.

5137 SOUTHWEST AVENUE • ST. LOUIS, MISSOURI 63110 • 314-772-2200

## PRODUCT INFORMATION DATA

JOBBER/DISTRIBUTOR  
DISCOUNT PRICE SHEET

Supersedes D-74-1a

April 19, 1974

### PACKAGED PRESERVATIVES

D-74-1b

<u>Standard Packing</u>	<u>Jobber Price</u>	<u>Dealer Price</u>	<u>Suggested List Price</u>
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#### PENTA WOOD PRESERVATIVE

Ready-to-use 5% penta solution in oil, non-paintable	1 gal. (6/case) 5 gal. drum 55 gal. drum	2.05/gal. 1.70/gal. 1.50/gal.	2.75/gal. 2.30/gal. 2.00/gal.	3.90/gal. 3.25/gal. 2.85/gal.
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#### PENTA STAIN

Preservative, water repellent and stain. Wide color range.	1 qt. (12/case) 1 gal. (4/case) 5 gal. drum 55 gal. drum	1.60/qt. 3.70/gal. 3.25/gal. 2.85/gal.	2.15/qt. 4.95/gal. 4.35/gal. 3.80/gal.	3.05/qt. 7.05/gal. 6.20/gal. 5.45/gal.
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#### WOODTOX RTU

Penta water repellent preservative, fast drying paintable, clear solution Meets TT-W-572B	1 qt. (12/case) 1 gal. (6/case) 5 gal. drum 55 gal. drum	1.15/qt. 2.60/gal. 2.15/gal. 1.80/gal.	1.55/qt. 3.50/gal. 2.90/gal. 2.40/gal.	2.20/qt. 4.95/gal. 4.10/gal. 3.45/gal.
--	---	---	---	---

#### PENTA WOOD PRESERVATIVE

#### CONCENTRATE

40% penta. Mix 1 to 10 with fuel oil. Makes 11 gallons RTU preservative. Non-paintable.	1 gal. (6/case) 5 gal. drum 55 gal. drum	4.20/gal. 3.80/gal. 3.30/gal.	5.60/gal. 5.05/gal. 4.40/gal.	8.00/gal. 7.25/gal. 6.50/gal.
---	--	-------------------------------------	-------------------------------------	-------------------------------------

#### TERMS:

Net 30 days where credit has been approved.  
Minimum order requirement \$100.00.

#### F.O.B.:

Our plant, St. Louis, Missouri and ex-warehouse points -  
stock items only. Freight will be prepaid and allowed on orders  
for \$150.00 or more of any combination of the above products.  
On customer pickup, freight will be allowed at common  
carrier rate.

TOLS004466

D-74-1b

THE INFORMATION GIVEN HEREIN IS BASED ON OUR EXPERIENCE, REPRESENTS OUR BEST JUDGMENT IN THE MATTER, AND IS  
INTENDED TO BE HELPFUL; BUT WE CANNOT ASSUME RESPONSIBILITY FOR ANY LOSS OR ACCIDENT THAT MAY RESULT FROM ITS USE.

BZTO104(e)041287

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

International Paper Company  
Long Bell Division  
Weed, CA 96094

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

The Woodtox 140 Bulk RTU that has been shipped from Richmond was blended several months before the rapid escalation of raw material cost and we were able to sell this product to you at a much lower price than our present charge from the Portland location.

Our price on Woodtox 140 RTU Bulk, FOB Portland is \$0.70/gal., price in effect at time of shipment. Freight rates are in the process of being calculated and we will advise upon placement of an order. This we believe, will be better because of the constant change in freight rate charges. Shipment will be by Truck and Trailer since we do not have tank cars on lease in this area.

If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004467

JMM/na

BZTO104(e)041288

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

Mr. Max Anthony, President  
Jasco Chemical Company  
1090 Terra Bella Avenue  
Mountain View, CA 94040

Dear Mr. Anthony:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

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If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004468

JMM/pa

BZTO104(e)041289

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

Jeld Wen Company  
P.O. Box 1016  
Flagstaff, AZ 86001

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

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If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004469

JMM/pa

BZTO104(e)041290

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

bcc: A. R. Saucedo  
J. T. Messner  
H. P. Struessel  
R. F. Simmons  
Carol Connell

June 6, 1974

Auburn Millworks  
P.O. Box 751  
Auburn, CA 95603

Gentlemen:

Our supply of Woodtox 140 RTU has been exhausted at the Richmond California location, and we have not been able to obtain the proper storage facilities near this area to justify the amount of volume sold during the recent months. Therefore, it will be necessary to ship future shipments from the Portland, Oregon terminal. For placement of orders, please send your Purchase Orders to the above address or call our office at (314) 772-2200, so that we can obtain a release from Portland.

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If you have any further questions please let me know.

Sincerely,

J. M. Montgomery  
General Sales Manager

TOLS004470

JMM/pa

BZTO104(e)041291

WTC Salesmen

J. M. Montgomery

WOODTOX PRE-PRIME RTU  
Product Information Data Sheets

St. Louis, Missouri

December 8, 1975

Attached is the new Woodtex Pre-Prime RTU data sheet, published December 1, 1975. Linn Noah is working on new sheets for Woodtox 140 RTU and Concentrate that he said would be coming in January 1976.

If you would like an additional supply of this new sheet - please reply.

Joe

JMM/pa

Attachment

cc: Wes Alt  
O. F. Martin  
C. R. Chappel  
J. D. Palmer  
Alex Saucedo

TOLS004471

BZTO104(e)041292



Chemicals  
and Coatings

Wood Treating Chemicals Dept., Koppers Company Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200



Specialty Wood Chemical

## PRODUCT INFORMATION DATA

December 1, 1975

### WOODTOX PRE-PRIME Ready-to-Use

Trade Name	Penta Water Repellent Preservative
Wood Treating Chemicals	Woodtox Pre-Prime Ready-to-Use
Chemical Name	5% pentachlorophenol in light petroleum solvent
Description	Clear, light amber colored solution
Penta Content	5.2% by weight technical pentachlorophenol meeting Federal Specification TTW-570. Contains minimum of 154 gm of penta/gallon as determined by AWPA A5, Section 5 method.
Specific Gravity	0.8067 at 15.5°C. (Typical)
Weight per gallon	6.72 pounds at 15.5°C (Typical)
Flash Point	Minimum 100°F (Tag Closed Cup) Typical 104°F (Tag Closed Cup)
Dilution Data	DO NOT DILUTE. This is a 5% Ready-to-Use solution.
Swellograph Efficiency	Meets or exceeds NWMA Swellometer test of 60% minimum - Average 75%.
Paintability	Woodtox Pre-Prime has been specially formulated for Maximum compatibility with paint primer and finish coatings applied at the factory. Woodtox Pre-Prime can get out of the wood. The mineral spirits carrier may be "trapped" when sash parts are bulk stacked or bundled too tightly and dip treated; doors or plywood flat stacked is another problem. However, where there is free air circulation to volatize the light solvent from the wood surfaces, Woodtox Pre-Prime open tank treated millwork, lumber or plywood can usually be finished within 24-60 hours after treatment. Woodtox Pre-Prime meets National Woodwork Manufacturers' Association standards.

TOLS004472

BZTO104(e)041293

WOODTOX PRE-PRIME Ready-to-Use

Corrosion

Contains corrosion inhibitor to aid in the prevention of color formation in shipping containers or storage tanks, and to minimize corrosion and/or discoloration of metal fasteners.

Storage Precautions

None, other than to keep out water. Stable over the normal range of storage conditions.

Uses of Woodtox  
Pre-Prime RTU

Woodtox Pre-Prime is used for the treatment of sash and other millwork to meet the Seal of Approval program of the National Woodwork Manufacturers Association for a preservative water repellent (IS-4). It is also useful for the treatment of other wood products where the benefits of a preservative and water repellent solution are desired that will help control stain, decay (rot), termites, and other wood boring insects; that will not cause grain raising; and that will leave the wood paintable.

Treating Data

Woodtox Pre-Prime may be applied by the vacuum, immersion, brush, or spray methods. The effectiveness of the treatment is in proportion to the distribution and retention of solution in the treated item.

Safe Handling of  
Pentachlorophenol  
Solutions

See Wood Treating Chemicals Department of Koppers Company, Inc. Bulletin No. 1049 entitled, "Safety Measures & Precautions for Handling Solutions Containing Pentachlorophenol".

Packaging

Bulk - 4,000 to 10,000 gallon tank cars; or in tank truck transports. Also available in 5 gallon and 55 gallon drums.

Shipping  
Classification

Chlorinated phenol petroleum solution - Wood Preservative Liquid, Not Exceeding 5% of chlorinated phenol by weight.

Production points  
and shipping points:

St. Louis, Missouri and Portland, Oregon

TOLS004473

BZTO104(e)041294

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
T. Onett  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Pfleiderer

From R. F. Simmons

Location Pittsburgh, PA K/1000

Location St. Louis, Missouri

Subject Monthly Report - October 1974

Date November 5, 1974

Wood Treating Chemicals Operations

### I. Shipment Highlights - (October Accounting Month)

#### 1. Camden, New Jersey Warehouse

8 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Penta Wood Pres. Conc.	3 X 55 Gal	165 G	577.50
Woodtox 140 RTU	1 X 55 Gal	55 G	80.00
Woodtox S Conc.	10 X 55 Gal	550 G	1,410.75
Woodtox RTU	1 X 55 Gal	55 G	110.00
Woodtox RTU	30 X 6 X 1 Gal	180 G	528.00
Lumbrella 346 Red Brown	18 X 53 Gal	954 G	3,291.30

#### 2. Enfield, North Carolina Warehouse

19 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtox 140 Conc.	3 X 55 Gal	165 G	511.50
Liquid Noxtane SS 1	9 X 55 Gal	495 G	2,417.25
Lumbrella 33 Redwood	27 X 3 Gal	81 G	668.25
Lumbrella 12 Red Brown	5 X 53 Gal	265 G	993.75
Lumbrella 15 Yellow	15 X 53 Gal	795 G	3,021.00
Lumbrella 15 Redwood	4 X 53 Gal	212 G	869.20
Timbertreat 625	7 X 55 Gal	385 G	1,696.48
Super Noxtane	25 X 50 Lbs	1250 #	612.50

#### 3. Newark, California Warehouse - By Customer

Cascade Industrial Supply	Redding, California	
Liquid Noxtane SS 1	3 X 345 Gal	3,431.03
Liquid Noxtane SS 1	20 X 55 Gal	3,646.50
Liquid Azide	6 X 55 Gal	1,753.13
		8,830.65

TOLS004474

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

Page 2

### Newark, California Warehouse - By Customer Continued...

#### Cascade Industrial Supply

Louisiana-Pacific)

Liquid Azide

Liquid Noxtane SS1

Oroville, California

9 X 55 Gal

2,629.69

33 X 55 Gal

6,016.73

8,846.42

#### Munnell & Sherrill

Liquid Noxtane SS1

Liquid Noxtane SS1

Clear End Sealer

Orange End Sealer

Clear End Sealer

Arcata, California

2 X 345 Gal

2,287.35

20 X 55 Gal

3,646.50

10 X 55 Gal

771.38

6 X 55 Gal

518.93

1 X 300 Gal

420.75

7,644.91

#### Sneider Lumber Prod.

Liquid Noxtane SS1

Liquid Azide

Turlock, California

10 X 55 Gal

2,585.00

4 X 55 Gal

1,518.00

4,103.00

#### Double D Wood Seal Company

Liquid Noxtane SS1

Lynnwood, Washington

4 X 55 Gal

729.30

#### Koppers Company, Inc.

Blue End Sealer

Oroville, California

1 X 55 Gal

118.25

TOLS004475

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

Page 3

### 4. Tuscaloosa, Alabama Blender - By Customer

#### Woodtox 140 R T U - Bulk

Tusco Wood Products Tuscaloosa, Alabama	11058 Gal	8,797.16
Holman Wood Products Northport, Alabama	3115 Gal	2,732.70
International Wooden Container Ardmore, Tennessee	3469 Gal	2,948.65
Talladega Box and Lumber Talladega, Alabama	5950 Gal	4,462.50
Cottondale Wood Products Tuscaloosa, Alabama	1535 Gal	1,304.75

### 5. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 R T U - Bulk

Leggett Lumber Co. Livingston, Texas	6183 Gal	5,255.55
Bennett Box Company Texarkana, Texas	5996 Gal	5,096.60
Texas Container Texarkana, Texas	6027 Gal	5,122.95

TOLS004476

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

Page 4

### Cotton Valley, Louisiana Blender - By Customer Continued.....

Commercial Box Texarkana, Texas	5895 Gal	5,010.75
Ozark Box Clarksville, Arkansas	5975 Gal	5,078.75

### 6. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant	54073 Gal	Timbertox 7 1/2% 36,769.64
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### 7. Portland, Oregon Blender - By Customer

Cascade Industrial Supply Redding, California	Woodtox PrePrime R TU 50 X 55 Gal	3,506.25
	Woodtox 140 R TU 50 X 55 Gal	<u>3,272.50</u>
		<u>6,778.75</u>

Cascade Wood Products White City, Oregon	Woodtox 140 R TU 6788 Gal	5,769.80
D. G. Shelter Prod. Sacramento, California	Woodtox 140 Conc. 20 X 55 Gal	2,821.50
Honolulu Wood Treating Honolulu, Hawaii	WR 340 Conc. 60 X 408 #	4,137.12
West Coast Mills Centralia, Washington	Woodtox 140 R TU 953 Gal	810.05

TOLS004477

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date November 5, 1974

Page 5

### Portland, Oregon Blender - By Customer Continued

Morris Lumber Company Grants Pass, Oregon	Timbertox 40 Conc. 2 X 345 Gal	1,490.40
Portland G. E. Company Portland, Oregon	Timbertox 40 Conc. 1 X 55 Gal	184.25
Dant Russell Inc. North Plains, Oregon	Woodtox 140 R T U 7963 Gal	6,370.40
Steve Regan Company Boise, Idaho	Timbertox 40 Conc. 2 X 55 Gal	331.65
	Timbertox 40 Conc. 12 X 5 Gal	191.70
		523.35

### 8. St. Louis, Missouri

Penta	(Calendar October Month)	Shipments
	F P D Plants	344,304
	Customers	347,784
	W T C	74,800
	<b>Total</b>	<b>766,888</b>

### W T C Products - Major Shipments - By Customer

Tremont Lumber Company Lumbrella 15 Green	Joyce, Louisiana 24 X 53 G	4,452.00
Pean Central R. R. Timbertox D-5	Philadelphia, PA 80 X 55 G	5,060.00

TOLS004478

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

Page 6

### W T C Products - Major Shipments - By Customer Continued...

#### Chemical Specialties

Liquid Nextane SS 1  
Timbertreat 625  
Green End Spray 400  
Penta Wood Pres. Conc.  
Lumbrella 12 Red Brown  
Lumbrella 33 Yellow  
Santobrite Pellets

#### Valdosta, Georgia

60 X 55 G	11,137.50
8 X 55 G	1,445.40
4 X 55 G	1,247.40
4 X 55 G	613.80
8 X 53 G	1,259.28
810 X 3 G	13,231.35
40 X 50 #	1,020.00
	<hr/>
	29,954.73

#### E T C Chemical

Liquid Nextane SS 1  
Timbertreat 625  
Lumbrella 12 Red Brown  
Lumbrella 33 Redwood  
Lumbrella 33 Yellow  
Lumbrella 33 Cherry Tone

#### Hattiesburg, Mississippi

3 X 55 G	631.13
3 X 55 G	586.58
1 X 53 G	143.50
54 X 3 G	1,100.79
405 X 3 G	7,016.63
135 X 3 G	2,722.01
	<hr/>
	12,200.64

#### G. S. A.

Wood Sealer Linseed Oil  
Wood Sealer Linseed Oil  
Wood Sealer Alkyd Resin

#### Kansas City, Missouri

12 X 55 G	924.00
82 X 5 G	779.00
48 X 5 G	780.00
	<hr/>
	2,483.00

Weyerhaeuser Company  
SPS 30% Solution

#### Craig, Oklahoma

8793 Gal	10,199.88
----------	-----------

TOLS004479

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

Page 7

### W T C Products - Major Shipments - By Customer Continued...

Great Southern Wirebound	Magnolia, Mississippi	
W R 80 Conc.	6 X 396 #	784.08
Coppertreat 60 Conc.	5 X 55 G	682.00
Coppertreat 80 Conc.	10 X 55 G	2,062.50
		<hr/>
		3,528.58

Bennett Box Company	Centerville, Iowa	
Woodtox 140 R TU	12000 Gal	10,200.00
Milan Box Company		
Woodtox 140 R TU		
Knapheide Mfg Company	Milan, Tennessee	
Woodtox 152 R TU	5944 Gal	5,052.40
Weathershield Mfg. Company	Quincy, Illinois	
Woodtox Pre Prime R TU	5898 Gal	7,077.60
Indiana Creosoting	Medford, Wisconsin	
Timbertox D-5	4030 Gal	3,304.60
Norton Mfg Company	Bloomington, Indiana	
Timbertox D-5	5754 Gal	3,567.48
Madison Wood Pres.	Memphis, Tennessee	
Penta Wood Pres. Conc	5649 Gal	3,502.38
Hood Lumber Company	Madison, Virginia	
Penta Wood Pres. Conc.	3953 Gal	9,289.55
R. J. Bond	Hattiesburg, Mississippi	
Penta Wood Pres. R TU	4012 Gal	9,829.40
	Carmi, Illinois	
	5622 Gal	3,485.64

TOLS004480

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

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### Balance of Shipments By Product Totals

Woodtox 140 R TU	16 X 55 Gal	1,543.75
Woodtox 152 R TU	4 X 55 Gal	418.00
Woodtox Pre Prime Conc.	3 X 55 Gal	544.50
Woodtox Pre Prime R TU	16 X 55 Gal	1,485.00
Woodtox R TU	6 X 5 Gal	76.50
Woodtox R TU	24 X 6 X 1 Gal	422.40
Penta Wood Pres. Conc.	25 X 55 Gal	5,333.90
Penta Wood Pres. Conc.	26 X 5 Gal	572.25
Penta Wood Pres. Conc.	36 X 6 X 1 Gal	1,023.00
Penta Wood Pres R TU	10 X 55 Gal	819.50
Penta Wood Pres. R TU	12 X 5 Gal	118.50
Penta Wood Pres. R TU	15 X 6 X 1 Gal	234.00
Timbertreat 95	1 X 55 Gal	236.50
Timbertreat 625	1 X 30 Gal	121.50
Coppertreat 110 R TU	3 X 55 Gal	186.45
Coppertreat 120 R TU	10 X 5 Gal	88.40
B Wood Pres.	2 X 6 X 1 Gal	28.80
Liquid Noxtane SS1	5 X 55 Gal	1,206.70
Super Noxtane	5 X 50 #	106.88
WR 340 Conc.	12 X 404 #	741.74
KLB Beam Sealer	12 X 55 Gal	1,188.00
Clear End Sealer	3 X 55 Gal	445.50
Red End Sealer	4 X 5 Gal	68.00
WTC 7-11	1 X 430 #	279.50
Woodtreat AA	10 X 40 #	228.00
Woodtreat AA	207 X 5 # Tubes	872.10
Woodtreat AA Guns	2 Each	71.76
Penta Tration Dye	1 X 12 #	42.96
Penta Stain #501	7 X 4 X 1 Gal	115.20
Penta Stain #502	4 X 5 Gal	82.00
Penta Stain #502	6 X 4 X 1 Gal	97.20
Penta Stain #504	2 X 4 X 1 Gal	32.40
Penta Stain #506	4 X 5 Gal	82.00
Penta Stain #506	2 X 4 X 1 Gal	72.40

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

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### Balance of Shipments By Product Totals Continued.....

Penta Stain #507	6 X 5 Gal	123.00
Penta Stain #507	2 X 4 X 1 Gal	32.40
Penta Stain #508	2 X 5 Gal	41.00
Penta Stain #509	3 X 55 Gal	577.50
Penta Stain #509	5 X 5 Gal	102.50

### Penta Invoicing for October Accounting Month

Koppers Plants	\$299,044.00
Customers	\$256,639.60

\$555,683.60 (Up \$303,681.55 from  
same period 1973)

### WTC Products Invoiced October Accounting Month

\$303,779.34 (Up \$106,550.11 from  
same period 1973)

### II. Raw Materials

While a few samples of co-solvent candidates have been received this month, we have no outstanding candidate and time is running out in which we can secure WK-55. We must secure help on this from sources that to date have not been productive or be prepared to abandon a 40% concentrate formulation.

Some basic materials are becoming soft in the market and as a result some pricing is slipping. Mineral Spirits dropped .02 per gallon recently; most aromatic oils are likewise beginning to fall a fraction of a cent per gallon.

TOLS004482

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

Page 10

### Raw Materials Continued....

The U. S. Borax strike is over and while supply is still tight, we feel it will ease by December; a price increase is anticipated as a result of the settlement.

Increases on water-dispersed pigment from Cal Ink Division of Tenneco were received this month and the Thalo Green and Blue colors are becoming more plentiful as the paint season for the year ends.

The Penta situation with Monsanto, if anything, become worse by the day. Production problems at the plant two weeks entirely stopped manufacture. Upon startup, the first penta produced has created insoluble problems unbelievable at W.T.C. Only 261,000 pounds of penta was produced in calendar October, of which we supplied the chlorine to make 314,000 pounds. Promises are for 1.5 million pounds in November, but there is a very real possibility of a labor strike at the plant November 12 that would just about wipe us out for the year and the future.

### III. Inventory

The excess stock of color seal materials remains as our only problem.

### IV. Profit Opportunities

Our Woodtex line appears as the money makers at present. Liquid Noxtane and Lumbrella costs are forcing customer resistance to our high pricing in a depressed market. There were no sales from Newark in calendar October.

TOLS004483

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 5, 1974

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### V. Assistance Requirements

1. I think we should make some serious approach to other penta suppliers than Monsanto; their general lackadaisical performance this year dictates we cannot continue to stay in business when confronted with this attitude at every turn.
2. Help on Co-Solvents.

### VI. General Comments

#### November Sales Forecast

Penta	\$350,000
WTC Products	\$250,000

Our projection is down because of low penta production and lack of sapstain control chemical sales.

### VII. Travel Plans

Pittsburgh Office	-	November 15
Camden Warehouse	-	November 14 (Postponed from October)
One Day Vacation	-	November 22

R. F. Simmons

RFS/sjk

TOLS004484

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery  
 T. Onett  
 D. F. Taylerson

To R. B. Putman From R. Simmons  
 Location Pittsburgh, PA K-750 Location St. Louis, Missouri  
 Subject Monthly Report - April 1974 Date May 8, 1974  
Wood Treating Chemicals Operations

### I. Shipment Highlights - (April Accounting Month)

#### 1. Houston, Texas Warehouse 4 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
WTC # 71	515 #	4120 #	1936.40

#### 2. Camden, New Jersey Warehouse 13 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtax PrePrime Conc.	55 Gal.	550	1413.50
Woodtax 140 R TU	55 Gal.	550	616.00
Woodtax R TU	55 Gal.	220	242.00
Woodtax R TU	5 Gal.	55	85.00
Woodtax R TU	6 X 1 Gal.	546	1222.02
Penta Wood Pres. Conc.	55 Gal.	275	495.55
Penta Wood Pres. Conc.	5 Gal.	25	74.75
Penta Wood Pres. Conc.	6 X 1 Gal.	24	71.76
Timbertreat 625	55 Gal.	165	501.60
Penta Stain #509 Amber	55 Gal.	165	473.55
Super Noxtane	50 #	950	345.42

#### 3. Enfield, North Carolina Warehouse 30 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtax 140 Conc.	55 Gal.	55	134.75
Liquid Noxtana SS 1	55 Gal.	1155	4563.35
Timbertreat 625	55 Gal.	495	1595.00
Liquid Azide 200	55 Gal.	55	299.92
Lumbrella 15 Redwood	53 Gal.	636	2009.76
Lumbrella 33 Yellow	3 Gal.	1539	11092.95

TOLS004485

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

Page 2

### Enfield, North Carolina Warehouse Continued

<u>Product</u>	<u>Container</u>	<u>Units</u>	\$
Super Noxtane	50 #	5700	2033.00
Santobrite Pellets	100 #	7900	3659.00

#### 4. Newark, California Warehouse - By Customer

Alpha Ind. Supply	Nevada City, California	
Liquid Noxtane SS-1	32 X 55 Gal. Drums	5624.96
Liquid Azide 200	13 X 55 Gal. Drums	2905.05
		<u>\$ 8530.01</u>

Trus Joist Corp.	Chino, California	
Clear End Sealer	2 X 55 Gal. Drums	183.70

Silvey Transportation	Newark, California	
Liquid Noxtane SS-1	4 X 55 Gal. Drums	502.26

Cascade Ind. Supply	Redding, California	
Liquid Noxtane SS-1	3 X 345 Gal. Bins	3149.51
Liquid Noxtane SS-1	22 X 55 Gal. Drums	3682.03
		<u>\$ 6831.54</u>

Munnell & Sherrill	Medford, Oregon	
Liquid Noxtane SS-1	11 X 55 Gal. Drums	1841.01

Munnell & Sherrill	Roseburg, Oregon	
Liquid Noxtane SS-1	11 X 55 Gal. Drums	1841.01

TOLS004486

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

Page 3

### Newark, California Warehouse Continued

Munnell & Sherrill Liquid Noxtane SS-1	Coos Bay, Oregon 21 X 55 Gal. Drums	3514.67
Munnell & Sherrill Liquid Noxtane SS-1	Eugene, Oregon 25 X 55 Gal. Drums	4184.13
Munnell & Sherrill Liquid Noxtane SS-1	Ukiah, California 1 X 345 Gal. Bin	1193.53
		\$ 12574.35

### 5. Richmond, California Blender - Totals By Customer

#### Woodtox 140 R T U - Bulk

Permapost Products Company Hillsboro, Oregon	7000 Gal.	\$ 2800.00
Jeld Wen Flagstaff, Arizona	6950 Gal.	\$ 2780.00
Auburn Millworks Auburn, California	6000 Gal.	\$ 2400.00

### 6. Tuscaloosa, Alabama Blender - Totals By Customer

#### Woodtox 140 R T U - Bulk

Cottondale Wood Products Tuscaloosa, Alabama	9058 Gals	\$ 4904.05
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TOLS004487

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### Tuscaloosa, Alabama Blender Continued

Holman Wood Products Northport, Alabama	2640 Gals.	\$ 1454.76
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Tusco Wood Products Tuscaloosa, Alabama	22587 Gals.	\$ 12387.08
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### 7. Cotton Valley, Louisiana Blender - Totals By Customer

#### Woodtex 140 R TU - Bulk

Ward Davis Texarkana, Texas	5964 Gals.	\$ 3101.28
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Bennett Box Company Texarkana, Texas	6244 Gals.	\$ 3746.40
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Great Southern Wirebound Box Co. Magnolia, Mississippi	14684 Gals.	\$ 7635.68
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Texas Container and Box Company Texarkana, Texas	12234 Gals.	\$ 7850.88
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Bibler Bros., Inc. Clarksville, Arkansas	12398 Gals.	\$ 6936.32
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B & F Mfg. Ashdown, Arkansas	6084 Gals.	\$ 3163.68
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### 8. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant	30192 Gal Timbertex 7 1/2%	\$ 15615.48
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TOLS004488

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### 9. Portland, Oregon Blender - Totals By Customer

Kinnear Door Company Centralia, Washington	Woodtox 140 RTU	10 X 55 G	555.50
Trus Joist Corp. Chino, California	Woodtox 140 RTU	2 X 55 G	124.30
Cascade Industrial Redding, California	Woodtox 140 RTU	100 X 55 G	4160.75
Brewer Chemical Corp. Honolulu, Hawaii	WR 340 Conc.	55 X 408# Drum	3792.36
Cascade Wood Products White City, Oregon	Woodtox P. P. RTU	7267 Gal	5232.24
J. H. Baxter Company	Petroset II Anstrick S/B Green	6 X 460#D 2 X 55 G	1518.00 328.90

### 10. St. Louis, Missouri

Penta (Calendar April Month)	LBS
F P D Plants	651,221
Customers	552,077
W T C	135,381

### W T C Products Major Shipments - By Customer

New Idea Avco Corp Woodtox 140 R T U	Coldwater, Ohio 4003 Gal. Bulk	\$ 2121.59
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TOLS004489

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### St. Louis, Missouri Major Shipments Continued

Milan Box Company Woodtox 140 R TU	Milan, Tennessee 4003 Gal. Bulk	\$ 3207.56
Kansas Box Company Woodtox 140 R TU	Independence, Kansas 6096 Gal. Bulk	\$ 3230.88
Dyer Fruit Box Company Woodtox 140 R TU	Dyer, Tennessee 5495 Gal. Bulk	\$ 2912.35
Bennett Box Company Woodtox 140 R TU	Centerville, Iowa 5018 Gal. Bulk	\$ 2659.54
Bennett Box Company Woodtox 140 R TU	Clinton, Iowa 5015 Gal. Bulk	\$ 2705.65
Northern Sash & Door Woodtox PrePrime RTU	Hawkins, Wisconsin 4049 Gal. Bulk	\$ 2713.83
Vetter Mfg. Company Woodtox PrePrime RTU	Stevens Point, Wisconsin 2508 Gal. Bulk	\$ 1504.80
Hood Lumber Company Penta Wood Pres. Conc.	Hattiesburg, Mississippi 7867 Gal. Bulk	\$13845.92
Wood Protection Company Penta Wood Pres. Conc.	Nacogdches, Texas 39376 Gal. Bulk	\$ 6456.68
Jennison Wright Penta Wood Pres. RTU	Granite City, Illinois 11365 Gal. Bulk	\$ 5000.60

TOLS004490

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### St. Louis, Missouri Major Shipments Continued

Indiana Creo Works Timbertox D-5	Bloomington, Indiana 5938 Gal. Bulk	\$ 3087.76
J. H. Baxter Company LST Co-Solvent	Eugene, Oregon 31694 # Bulk	\$ 4532.24
M & T Transport Penta Wood Pres. Conc.	East Syracuse, New York 42 X 55 Gal.	\$ 5520.90
Webb & Son Penta Wood Pres. Conc.	Sherburne, New York 23 X 55 Gal.	\$ 3289.00
Farmers Union Cent. Ex. Penta Wood Pres. Conc. Penta Wood Pres. Conc.	Great Falls, Montana 180 X 5 Gal. 50 X 6 X 1 Gal.	\$ 1890.00 \$ 720.00
Farmers Union Cent. Ex. Penta Wood Pres. Conc Penta Wood Pres. Conc.	Billings, Montana 210 X 5 Gal 20 X 6 X 1 Gal	\$ 2205.00 \$ 288.00
Penn Central R.R. Penta Wood Pres. RTU	Columbus, Ohio 88 X 55 Gal	\$ 4210.80
Elco Mfg. Company Woodtax P.P. Conc	Pittsburgh, PA 20 X 55 Gal.	\$ 2985.55
Koppers Company, Inc. WK 55 Penta Co-Solvent	Salisbury, Maryland 80 X 55 Gal.	\$ 3076.92
Bell Lumber Company Petroset II	Calgary, Alberta, Canada 12 X 460 #	\$ 3036.00

TOLS004491

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### St. Louis, Missouri Major Shipments Continued

Asplundh Tree Expert Poletox	Louisville, Kentucky 130 X 60 #	\$ 2886.00
Weyerhaeuser Company Liquid Noxtane SS-1	De Queen, Arkansas 20 X 55 Gal	\$ 4081.00
Kay Enterprises Penta Stain #504 Penta Stain #506	Janesville, Iowa 5 X 55 Gal. 2 X 55 Gal.	\$ 789.25 \$ 315.70
		\$ 1104.95
ETC Chemical Co. Yellow Lumbrella 33 Liquid Noxtane SS-1	Hattiesburg, Mississippi 81 X 3 Gal 4 X 55 Gal.	\$ 1323.14 \$ 649.44
		\$ 1972.58
Yawkey Bissell Hardwood Super Diprite Liquid Noxtane SS-1 Liquid Azide 200	White Lake, Wisconsin 700 X 50 # 8 X 55 Gal. 2 X 55 Gal.	\$ 9796.50 \$ 1298.88 \$ 599.83
		\$11695.21

TOLS004492

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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Crown Chemicals Company  
 Penta Wood Pres. RTU  
 Penta Wood Pres. RTU  
 Penta Wood Pres. Conc  
 Penta Wood Prs. Conc.  
 Penta Stain #508  
 Woodtox RTU  
 Woodtox RTU  
 Coppertreat 80 Conc.

St. Louis, Missouri	
4 X 55 Gal.	\$ 288.20
10 X 6 X 1 Gal.	\$ 103.80
20 X 5 Gal.	\$ 269.10
15 X 6 X 1 Gal.	\$ 270.54
5 X 5 Gal.	\$ 76.25
4 X 55 Gal.	\$ 354.20
10 X 5 Gal.	\$ 101.50
4 X 5 Gal.	\$ 73.60
	<hr/>
	\$ 1537.19

Chemical Specialties  
 Liquid Noxtane SS-1  
 Super Noxtane  
 Santobrite Pellets  
 Green End Spray 400  
 Yellow Lumbrella 15  
 Yellow Lumbrella 33  
 Timbertreat 625

Valdosta, Georgia	
120 X 55 Gal.	\$20017.80
80 X 50 #	\$ 1224.00
80 X 100 #	\$ 2460.00
10 X 55 Gal.	\$ 2722.50
10 X 53 Gal.	\$ 1369.99
864 X 3 Gal.	\$14113.44
5 X 55 Gal.	\$ 742.50
	<hr/>
	\$ 42650.23

### Balance of Shipments By Product Totals

Woodtox P.P. Conc.	6 X 55 Gal.	887.70
Woodtox P.P. RTU	4 X 55 Gal.	288.20
Woodtox RTU	1 X 5 Gal.	10.15
Woodtox RTU	18 X 6 X 1 Gal.	334.68
Woodtox 140 RTU	2 X 55 Gal.	124.30
Woodtox 152 RTU	8 X 55 Gal.	602.80
Penta Wood Pres. Conc.	17 X 55 Gal.	2554.75

TOLS004493

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### Balance of Shipments By Product Totals Continued

Penta Wood Pres. Conc.	10 X 5 Gal.	149.50
Penta Wood Pres. Conc.	11 X 6 X 1 Gal.	220.44
Penta Wood Pres. RTU	7 X 55 Gal.	302.17
Penta Wood Pres. RTU	5 X 5 Gal.	37.25
Penta Wood Pres. RTU	13 X 6 X 1 Gal.	134.94
Penta Stain #502	2 X 5 Gal.	28.00
Penta Stain #502	19 X 4 X 1 Gal.	268.72
Penta Stain #503	1 X 5 Gal.	14.00
Penta Stain #503	3 X 4 X 1 Gal.	39.60
Penta Stain #506	20 X 5 Gal.	360.50
Penta Stain #506	13 X 1 Gal.	42.60
Penta Stain #507	31 X 5 Gal.	472.75
Timbertreat 625	3 X 55 Gal.	550.00
Liquid Noxtane SS-1	1 X 55 Gal.	223.85
Super Noxtane	188 X 50 #	2995.60
Super Diprite	20 X 50 #	380.00
Coppertreat 80 Conc.	2 X 55 Gal.	479.60
Coppertreat 110 RTU	2 X 55 Gal.	124.30
Clear End Sealer	2 X 55 Gal.	183.70
Wood Seal Wax	2 X 426 #	298.20
Lumbrella Red Brown	2 X 53 Gal.	342.38
Lumbrella Redwood 33	27 X 3 Gal.	668.25
B Wood	16 X 5 Gal.	95.20
Woodtreat AA	29 X 40 #	398.00
Woodtreat AA	90 X 5 #	198.90
W T C 7-11	1 X 430 #	249.40
W T C 7-11	3 X 40 #	72.00
Dating Nails	50 Lots	209.35

TOLS004494

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

Page 11

### Penta Invoicing for Month

Koppers	\$173,999.00
Customers	\$169,716.54

\$343,715.54      (Up \$33,500 from same month last year)

### W T C Products Invoicing for Month

\$314,242.99      (Up \$106,000 from same month last year)

## II. Raw Materials

The following material increases have occurred.

Penta	to .31 Lb. + Frt. Eff. 5/1
Mineral Spirits @ Portland	to .39 Gal + Frt. Eff. 5/1
Minerals Spirits @ St. Louis	to .35 Gal. Delv. Eff. 5/6
Chevron 400 Solvent	to .30 Gal. Delv. Eff. 5/1
WK -55 Solvent	to .03 Lb. + Frt. Eff. 5/1
Citric Acid	to .45 Lb. Delv. Eff 5/1
Filtrez 60	to .25 Lb. Delv. Eff. 5/1
Lanvar (Varnish cut Resin)	to .295 Lb. Delv. Eff. 5/1
Oxo Alcohol Bottoms	to .08 Lb. + Frt. Eff. 5/1
Ketone Bottoms (KB-21)	to .0495 Lb. Delv. Eff. 5/1
Sodium Pentachlorophenate	to .369 Lb. + Frt. Eff. 4/1
SPS-30 Solution	to .595 Gal. Delv. Eff. 3/15

TOLS004495

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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Most materials previously reported as being in short supply have not particularly changed in status. At some times supply may be extremely tight, while the very next week the item might be secured with little difficulty. Coupled with shortages of supplies may be transportation problems, plant labor strikes and equipment failures to all affect our material supply. At present, Dow continues on strike so we can expect little increase in penta availability there. As well, we have heard rumors of Vulcan shutting down for a month. There continues to be the threat of a nation-wide transportation strike by the Teamsters May 13; one of our major pigment suppliers is being struck at two plants; and due to equipment breakdown, the Lithium Hydroxide used in Liquid Noxtane will be tight for awhile.

### III. Inventory

There has been some movement of Woodtox 140 from Richmond, California, but it is painfully slow; there remains 113,895 gallons as of this writing. I do not see why we have continued to look on this as a market area with all the advantages we have had in recent months and still have not been able to sell product.

We have had three opportunities to sell Copper Naphthenates and clear out this stock in the past month, but I feel due to slow response to the inquiries we have sold to none of the prospects.

Color Seal materials remain in inventory.

### IV. Profit Opportunities

Cost updating on all products was current as of May 1. Sales prices have been revised to reflect the new costs.

TOLS004496

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### V. Assistance Requirements

1. More penta from Monsanto - either by supplying raw material/ swapping them certain other materials/ or good relations.
2. Move to get Dow to increase Penta availability up to the contract, at least.
3. Purchasing Help
  - A. Follow up on increase fuel oil allocation for St. Louis.
  - B. Oil Needed for Superior at a decent price. Moving from Harvey, LA., adding 5% co-solvent and blending too expensive for consideration, except as emergency measure.
4. Drafting assistance, as reported last month, have received no commitment.
5. Also have had no response to request for engineering assistance on Lumbrella production line.

### VI. General Comments

Sales continue to be over \$600,000 per month. May invoicing is \$309,000 for the first two weeks; we are aiming at \$675,000 to \$700,000 this month, barring the truck strike actuality for the last week of the month.

In general, invoicing is keeping pace with the shipments.

TOLS004497

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 8, 1974

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### VII. Travel Plans

Plan to be at Newark, California during all of next production run to investigate production shrinkage that seems excessive compared to St. Louis production of same product, - Some time near end of May or first of June.

R. Simmons

RFS/sjk

TOLS004498

# KOPPERS

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery  
 T. Onett  
 D. F. Taylerson

## Interoffice Correspondence

To R. B. Putman From R. F. Simmons  
 Location Pittsburgh, PA K/1000 Location St. Louis, Missouri  
 Subject Monthly Report - September 1974 Date October 4, 1974  
Wood Treating Chemicals Operations

### I. Shipment Highlights - (September Accounting Month)

#### 1. Houston, Texas Warehouse 1 Sale Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
WTC # 71	2 X 515 #	1030 #	721.00

(Houston Warehouse Now Closed.)

#### 2. Camden, New Jersey Warehouse 13 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Penta Wood Pres. Conc.	19 X 55 Gal	1045 G	3646.50
Penta Wood Pres. R TU	1 X 55 Gal	55 G	90.75
Penta Wood Pres. R TU	8 X 55 Gal	40 G	74.00
Woodtox Pre Prime Conc.	2 X 55 Gal	110 G	313.50
Woodtox R TU	1 X 5 Gal	5 G	11.75
Woodtox R TU	81 X 6 X 1 Gal	486 G	1360.80
Liquid Noxtane SS1	1 X 55 Gal	55 G	233.75

#### 3. Enfield, North Carolina Warehouse 9 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Liquid Noxtane SS1	7 X 55 Gal	385 G	1636.25
Lumbrella 33 Redwood	27 X 3 Gal	81 G	668.25
Lumbrella 15 Yellow	9 X 53 Gal	477 G	1717.20
Lumbrella 15 Redwood	4 X 53 Gal	212 G	763.20
Timbertreat 625	2 X 55 Gal	110 G	434.50
Timbertreat 625	1 X 5 Gal	5 G	21.00
Super Noxtane	40 X 50 #	2000 #	840.00

TOLS004499

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

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Date October 4, 1974

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### 4. Newark, California Warehouse - By Customer

Munnell & Sherrill	Arcata, California	
Liquid Noxtane SS 1	2 X 345 Gal	2287.35
Liquid Noxtane SS 1	15 X 55 Gal	2734.88
Clear End Sealer	10 X 55 Gal	771.38
Blue End Sealer	1 X 55 Gal	86.49
Orange End Sealer	4 X 55 Gal	345.95
		6226.05

Wasatch Chemical	Salt Lake City, Utah	
Timbertox 40 Conc.	36 X 55 Gal	5940.00

Cascade Industrial Supply	Redding, California	
Liquid Noxtane SS 1 ]	3 X 345 Gal	3431.03
Liquid Noxtane SS 1	16 X 55 Gal	2917.20
Liquid Azide 200	5 X 55 Gal	1753.13
		8101.35

Munnell & Sherrill	Medford, Oregon	
Liquid Noxtane SS 1	20 X 55 Gal	4009.50

### 5. Tuscaloosa, Alabama Blender - By Customer

#### Woodtox 140 R T U - Bulk

International Wooden Cont.	3950 Gal	2962.50
Ardmore, Tennessee		
Cottondale Wood Products	546 Gal	409.50
Tuscaloosa, Alabama		

TOLS004500

# KOPPERS

## Interoffice Correspondence

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From R. F. Simmons

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### Tuscaloosa, Alabama Blender - By Customer Continued

Norman Treating Company Goshen, Alabama	4944 Gal	3708.00
Tusco Wood Products Tuscaloosa, Alabama	7968 Gal	6371.70
Talladega Box and Lumber Talladega, Alabama	5929 Gal	4446.75

### 6. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 R T U - Bulk

B & F Manufacturing Co. Ashdown, Arkansas	6010 Gal	4507.50
Lear Sigler Corporation Arcadia, Louisiana	7330 Gal	5497.50
Bennett Box Company Texarkana, Texas	5861 Gal	4395.75
Great Southern Wirebound Magnolia, Mississippi	7054 Gal	5290.50
S & W Industries Fort Smith, Arkansas	5850 Gal	4972.50
Bibler Bros Lumber Co. Clarksville, Arkansas	5967 Gal	4475.25

TOLS004501

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

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### Cotton Valley, Louisiana Blender - By Customer Continued

Texas Container & Box Co. 5852 Gal 4974.20  
Texarkana, Texas

Ozark Box & Crating Co. 11995 Gal 8996.25  
Caney, Kansas

### 7. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant 41642 Gal Timbertox 7 1/2% 27364.20

### 8. Portland, Oregon Blender - By Customer

Willard Products WR 340 Conc. 438.19  
Redwood City, California 6 X 408 #

J. H. Baxter Petroset II 2530.00  
Eugene, Oregon 10 X 460 #

Anstrik S/B Green 328.90  
2 X 55 Gal

2858.90

Beaver Lumber Company Woodtox 140 R TU 1509.75  
Santa Clara, California 2013 Gal

Munnell & Sherrill Woodtox Pre Prime R TU  
Arcata, California 3448 Gal 2930.80  
2 X 55 Gal 93.50

3024.30

TOLS004502

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

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### Portland, Oregon Blender - By Customer Continued

Cascade Industrial Supply Klamath Falls, Oregon	Woodtox 140 R TU 5 X 55 Gal	396.00
Kinnear Door Company Centralia, Washington	Woodtox 140 R TU 10 X 55 Gal	797.50

### 9. St. Louis, Missouri

Penta	(Calendar September Month)	Shipments
F P D Plants	630,643	
Customer's	531,240	
W T C	80,500	
Total	1,242,383	

### W T C Products - Major Shipments - By Customer

Bennett Box Company Woodtox 140 R TU	Centerville, Iowa 18095 Gal	14144.45
Kansas Box and Lumber Woodtox 140 R.T.U.	Independence, Kansas 5968 Gal	5072.80
New Idea Division Woodtox 140 R.T.U.	Coldwater, Ohio 4068 Gal	3457.80
Hood Lumber Company Penta Wood Pres. Conc.	Hattiesburg, Mississippi 3969 Gal	9327.15
Hurd Millwork Woodtox Pre Prime R.T.U.	Medford, Wisconsin 5899 Gal	4247.28
Jordan Company, Inc. Timbertox D-5	Memphis, Tennessee 4012 Gal	2427.26

TOLS004503

# KOPPERS

## Interoffice Correspondence

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From R. F. Simmons  
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### W T C Products, Major Shipments Continued

Weyerhaeuser Company SPS 30% Solution	Craig, Oklahoma 10801 Gal	12529.16
Caribbean Lumber Company Super Noxtane	Savannah, Georgia 250 X 100 #	12000.00
Lyntegar Elec Coop Penta Wood Pres. Conc	Tahoka, Texas 10 X 55 Gal	1815.00
Graybar Electric Penta Wood Pres. Conc.	Columbus, Ohio 10 X 55 Gal	1724.25
Brunson & Son Post Mill Penta Wood Pres. Conc.	Arcadia, Louisiana 10 X 55 Gal	1815.00
Van Horn & Metz Company Penta Wood Pres. Conc.	Conshohocken, PA 20 X 55 Gal	3267.00
Farmers Union Central Penta Wood Pres. Conc. Penta Wood Pres. Conc.	West Billing, Montana 450 X 5 Gal 40 X 6 X 1 Gal	7312.50 900.00
Farmers Union Central Penta Wood Pres. Conc. Penta Wood Pres. Conc.	St. Paul, Minnesota 40 X 6 X 1 Gal 35 X 5 Gal	900.00 568.75
		9681.25
Selma Pressure Treating L S T Co-Solvent II	Selma, California 40 X 435 #	3393.00

TOLS004504

# KOPPERS

## Interoffice Correspondence

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From R. F. Simmons

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### W T C Products, Major Shipments Continued

Asplundh Tree Expert Polelife T.F.	Willow Grove, PA 90 X 50 #	1764.00
E T C Chemical Co, Lumbrella 33 Cherry Tone Lumbrella 33 Redwood	Hattiesburg, Mississippi 54 X 3 Gal 54 X 3 Gal	882.10 882.09 <hr/> 1764.19
Tremont Lumber Company Lumbrella 15 Green	Winnfield, Louisiana 24 X 53 Gal	4452.00
Louisiana Pacific Corp. Lumbrella 12 Green	Winnfield, Louisiana 24 X 53 Gal	4515.60
Chemical Specialties Liquid Noxtane SS 1 Lumbrella 33 Yellow Lumbrella 12 Red Brown Timbertreat 625 Green End Spray 400 Penta Wood Pres. Conc. NATA - NA3 Crystals	Valdosta, Georgia 40 X 55 Gal 432 X 3 Gal 8 X 53 Gal 2 X 55 Gal 5 X 55 Gal 10 X 5 Gal 1 X 50 #	7425.00 7056.72 1087.56 386.10 1707.75 162.00 33.75 <hr/> 17858.88

TOLS004505

# KOPPERS

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From R. F. Simmons

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### Balance of Shipments By Product Totals

Woodtox 140 R TU	5 X 55 Gal	440.00
Woodtox Pre Prime Conc.	2 X 55 Gal	313.50
Woodtox Pre Prime R TU	3 X 55 Gal	272.25
Woodtox R TU	15 X 5 Gal	176.25
Woodtox R TU	47 X 6 X 1 Gal	789.60
Timbertox D-5	23 X 55 Gal	1302.95
Penta Wood Pres. Conc.	15 X 55 Gal	2887.50
Penta Wood Pres. Conc.	54 X 5 Gal	1104.00
Penta Wood Pres. Conc.	26 X 6 X 1 Gal	717.60
Penta Wood Pres. R TU	75 X 5 Gal	693.75
Penta Wood Pres. R TU	23 X 6 X 1 Gal	323.20
Clear End Sealer	2 X 55 Gal	297.00
Green End Sealer	1 X 55 Gal	159.50
Wood Seal Wax	1 X 40 #	15.75
Coppertreat 80 Conc	2 X 55 Gal	479.60
Polelife T.F.	10 X 50 #	245.00
B Wood Pres.	20 X 5 Gal	165.00
B Wood Pres.	32 X 6 X 1 Gal	460.80
Woodtreat AA	20 X 40 #	364.80
Woodtreat AA	99 X 5 #	429.30
Woodtreat AA Guns	3 Each	107.64
WTC # 74 Floc. Agent	2 X 460 #	460.00
Lumbrella 33 Yellow	27 X 3 Gal	490.05
Super Noxtane	40 X 50 #	820.00
Super Diprite	60 X 50 #	1080.00
Penta Stain #502	8 X 5 Gal	144.00
Penta Stain #506	10 X 4 X 1 Gal	162.50
Penta Stain #509	1 X 55 Gal	192.50

TOLS004506

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

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### Penta Invoicing for Accounting Month

Koppers	\$ 179,951.94
Customers	\$ 238,883.36
	_____
	\$ 418,835.30 (Up \$128,671 from same month 1973)

### W T C Products Invoiced for Accounting Month

\$ 269,398.03 (Up \$65,566 from same month 1973)

### II. Raw Materials

Efforts continue to find suitable Co-Solvents for W T C use. One prime candidate is under-going extensive testing. Another was recommended to W. T. Henry this month for treating plant use when it proved unsatisfactory for our use. Availability and pricing secured on over 50 candidates this month.

A half-cent fuel oil increase was effective October 1; availability has not been a problem yet. St. Louis mineral spirits was increased an average of .02 per gallon by all the suppliers in the past month, but this has now backed off to a net .005 increase. Specialty chemicals including our red pigments, biphenyl and tall oil fatty acids are continuing upward in cost.

We are encountering supply problems on Borax products, Citric Acid and Ethylene Glycol but are not out nor uncomfortable at the moment. We

TOLS004507

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

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are however out of Thalo Green dispersion from Cal-Ink and precariously low on Thalo Blue. This stops all production of Green End Spray 400 and Brewton Green Lumbrella, as well as jeopardizing Tremont Green Lumbrella and the proposed Blue Anstriks for Koppers.

It is apparent Monsanto will not live up to its 15 million pound commitment on Penta. Nine month totals on shipment are:

Koppers Plants	4,904,097
Customers	5,072,535
Wood Treating	923,883
	<hr/>
	10,900,515

But to be deduced from this is material we have supplied - chlorine for 571,200 Lbs. and phenol for 1,570,740. We have purchased (and are committed to) chlorine for another 1,178,000 lbs of penta; this will be delivered thru February 1975.

### III. Inventory

Excess stock of color seal materials remain on hand.

### IV. Profit Opportunities

Cost standards are current and these are now being updated as increases occur. Our selling prices are meeting with some customer resistance; Woodtox 140 sales from Cotton Valley and Tuscaloosa appear to be off a little in the past two weeks, although there has not been enough time to really tell since our last increase.

TOLS004508

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

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Date October 4, 1974

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Considerable resistance has been met on the Penta selling price needed to cover our higher prices raw materials.

Our application for equipment expenditure to package Lumbrella 33 is submitted. When installed we expect to reduce costs .50 gallon on this product.

### V. Assistance Requirements

1. Contract for Chlorine purchase for 1975.
2. To our count thru September Dow provided approximately 440,000 lbs. Penta. Increased shipments are still needed as well as an FPD contract for next year.
3. Help on Tenneco, Cal-Ink Division pigments.
4. Co-Solvent candidates for testing.

### VI. General Comments

#### October Sales Forecast

Penta	\$ 450,000
W T C Products	\$ 300,000

### VII. Travel Plans

Pittsburgh Office - October 8

Visit to Camden and Enfield Warehouses - October 16 - 17

RFS/sjk

R. F. Simmons

TOLS004509

# KOPPERS

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery  
 T. Onett  
 D. F. Taylerson

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location Pittsburgh, PA K-750

Location St. Louis, Missouri

Subject Monthly Report - May 1974  
Wood Treating Chemicals Operations

Date June 3, 1974

### I. Shipment Highlights - (May Accounting Month)

#### 1. Houston, Texas Warehouse 6 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
WTC # 71	515 #	10300 #	4841.00
WTC # 74	460 #	920 #	460.00

#### 2. Camden, New Jersey Warehouse 22 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtox PrePrime Conc	55 Gal.	380 G	960.78
Woodtox RTU	55 Gal.	385 G	577.50
Woodtox RTU	5 Gal.	30 G	45.00
Woodtox RTU	6 X 1 Gal.	342 G	840.61
Woodtox S	55 Gal.	550 G	1336.50
Penta Wood Pres. Conc.	55 Gal.	660 G	2145.00
Penta Wood Pres. Conc.	6 X 1 Gal.	60 G	252.00
Penta Wood Pres. RTU	55 Gal.	330 G	330.00
Penta Wood Pres. RTU	6 X 1 Gal.	204 G	397.80
Super Diprite	50 #	1600 #	547.20

#### 3. Enfield, North Carolina Warehouse 20 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Santobrite Pellets.	100 #	5000 #	2310.00
Santobrite Briquettes	100 #	1000 #	470.00
Super Noxtane	50 #	6900 #	2500.00
Lumbrella 12 Red/Brown	53 Gal.	318 G	931.74
Penta Wood Pres. Conc	55 Gal.	165 G	495.00

TOLS004510

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

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### Enfield, North Carolina Warehouse Continued

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Liquid Noxtane SS1	55 Gal.	2640 G.	9689.80
Liquid Azide	55 Gal.	165 G.	1072.50

### 4. Newark, California Warehouse - By Customer

Cascade Industrial Supply	Redding, California	
Liquid Noxtane SS1	24 X 55 Gal.	4263.60
Liquid Noxtane SS1	3 X 345 Gal.	3343.05
Liquid Azide 200	6 X 55 Gal.	1612.88
		\$ 9219.53

P. B. M.	Chico, California	
Liquid Noxtane SS1	44 X 55 Gal.	\$ 7816.60

Munnell & Sherrill	Eugene, Oregon	
Clear End Sealer	4 X 55 Gal.	\$ 330.99

Munnell & Sherrill	Coos Bay, Oregon	
Liquid Noxtane SS1	40 X 55 Gal.	\$ 7293.00

Munnell & Sherrill	Arcata, California	
Clear End Sealer	2 X 300 Gal.	780.30
Clear End Sealer	10 X 55 Gal.	715.28
Liquid Noxtane SS1	1 X 345 Gal.	1114.35
Liquid Noxtane SS1	10 X 55 Gal.	1776.50
Blue End Sealer	1 X 55 Gal.	82.75
Orange End Sealer	6 X 55 Gal.	496.49

TOLS004511

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

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Date June 3, 1974

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### 5. Richmond, California Blender - By Customer

#### Woodtox 140 RTU - Bulk

Selma Pressure Treating Selma, California	14035 Gal.	\$ 5614.00
Jeld Wen Company Flagstaff, Arizona	5800 Gal.	\$ 2320.00
Permapost Products Hillsboro, Oregon	7030 Gal.	\$ 2952.60
Cascade Wood Products White City, Oregon	7430 Gal.	\$ 2972.00
B & F Box and Lumber Co. Los Alamitos, California	2400 Gal.	\$ 960.00

### 6. Tuscaloosa, Alabama - Blender - By Customer

#### Woodtox 140 RTU - Bulk

Tusco Wood Products Tuscaloosa, Alabama	15963 Gal.	\$ 9696.90
Cottondale Wood Products Tuscaloosa, Alabama	4762 Gal.	\$ 3219.87
Holman Wood Products Northport, Alabama	5296 Gal.	\$ 3239.85

TOLS004512

# KOPPERS

## Interoffice Correspondence

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From R. F. Simmons

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### 7. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 RTU - Bulk

B & F Mfg. Co. Ashdown, Arkansas	5969 Gal.	3760.47
Bennett Box Company Texarkana, Texas	5975 Gal.	3764.25
Commercial Box Texarkana, Texas	6112 Gal.	3850.56
General Box Company Houston, Texas	7156 Gal.	4293.60
Great Southern Wirebound Box Magnolia, Mississippi	15018 Gal.	9010.80
Lear Siegler Corp. Arcadia, Louisiana	8149 Gal.	4889.40
Leggett Lumber Company Livingston, Texas	6271 Gal.	3950.73
Texas Container Texarkana, Texas	5958 Gal.	3574.80

### 8. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant	24080 Gal.	Timbertox 7 1/2%	\$ 13546.05
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TOLS004513

# KOPPERS

## Interoffice Correspondence

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From R. Simmons

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### 9. Portland, Oregon Blender - By Customer

Brewer Chemical Corp. Honolulu, Hawaii	Woodtox 140 Conc.	70 X 55 G	7657.65
Willard Products Co. Redwood City, California	Timbertox 40 Conc	4086 G	7191.36
Cascade Industrial Supply Klamath Falls, Oregon	Woodtox 140 RTU	100 X 55 G	5610.00
Northwest Plywood & Lumber Arlington, Washington	Woodtox 140 RTU	6776 G	3726.80
Overhead Door Company Salem, Oregon	Woodtox PrePrime RTU	2404 G	1730.88
Morris Lumber Co., Inc Grants Pass, Oregon	Timbertox 40 Conc	2 X 345 G	1621.50
Great Western Chemical Co. Seattle, Washington	Woodtox 140 RTU	1987 G	1251.81
J. H. Baxter Company Eugene, Oregon	Petroset II	4 X 460 #	1012.00
Kinnear Corp. Centralia, Washington	Woodtox 140 RTU	10 X 55 G	742.50

TOLS004514

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

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Date June 3, 1974

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### 10. St. Louis, Missouri

Penta	(Calendar May Month)	Lbs.
F PD Plants		477,099
Customers		664,889
W T C		100,102
Total		1,242.090

### W T C Products      Major Shipments - By Customer

Weyerhaeuser Company SPS 30% Solution	Craig, Oklahoma 9991 Gal.	\$ 9291.63
Vulcan Asphalt WK-55 Penta Co-Solvent	Cordova, Alabama 5512 Gal.	\$ 1818.96
Northern Sash and Door Woodtox Preprime RTU	Hawkins, Wisconsin	\$ 2707.47
Norton Mfg. Company Timbertox D-5	Memphis, Tennessee	\$ 2978.56
Asplundh Tree Expert Poletox	Pulaski, Wisconsin	\$ 8880.00
Bennett Box Company Woodtox 140 RTU	Centerville, Iowa 10129 Gal.	\$ 5773.53
Jordan Company, Inc Woodtox 140 RTU	Memphis, Tennessee 4003 Gal.	\$ 2281.71

TOLS004515

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

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### St. Louis, Missouri Major Shipments Continued

Ozark Box and Crating Woodtox 140 RTU	Caney, Kansas 11932 Gal.	\$ 6801.24
Milan Box Company Woodtox 140 RTU	Milan, Tennessee 5358 Gal.	\$ 3054.06
J. R. Ginn and Company Woodtox 140 RTU	St. Louis, Missouri 3898 Gal.	\$ 2455.74
Dyer Fruit Box Company Woodtox 140 RTU	Dyer, Tennessee 5916 Gal.	\$ 3727.08
Hood Lumber Company Penta Wood Pres. Conc	Hattiesburg, Mississippi 7853 Gal.	\$ 14571.59
Universal Co-op. Inc Penta Wood Pres. Conc	Alliance, Ohio 3996 Gal.	\$ 7032.96
Jennison Wright Corp. Penta Wood Pres. RTU	Granite City, Illinois 16571 Gal.	\$ 7636.90
R. J. Bond Lumber Company Penta Wood Pres. RTU	Carmi, Illinois 5657 Gal.	\$ 2828.50
Penn Central R.R. Penta Wood Pres. RTU	Columbus, Ohio 88 X 55 Gal.	\$ 4210.80
Weyerhaeuser Company Liquid Noxtane SS 1	Lewiston, North Carolina 52 X 55 Gal.	\$ 10725.00

TOLS004516

# KOPPERS

## Interoffice Correspondence

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From R. Simmons

Location \_\_\_\_\_

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### St. Louis, Missouri Major Shipments Continued

ETC Chemical Lumbrella 33 Yellow	Hattiesburg, Mississippi	\$ 2205.23
	135 X 3 Gal.	

Chemical Specialties Liquid Noxtane SS1	Valdosta, Georgia	
Lumbrella 33 Yellow	60 X 55 Gal	10741.50
Lumbrella 15 Yellow	837 X 3 Gal	13672.40
Timbertreat 625	30 X 53 Gal	4436.10
End Spray 400 Green	5 X 55 Gal	792.00
Super Noxtane	20 X 55 Gal	5643.00
Santobrite Pellets	80 X 50 #	1224.00
	40 X 100 #	1640.00

\$38,149.00

Turner Supply Company Liquid Noxtane SS1
Timbertreat 625
Super Noxtane
Santobrite Pellets
Santobrite Pellets
Poletreat 15
Polykraft Paper

Mobile, Alabama	
5 X 55 Gal.	928.13
2 X 55 Gal.	316.80
200 X 50 #	3060.00
101 X 50 #	2020.00
261 X 100 #	9515.00
2 X 45 #	26.21
4 Rolls	31.20

\$15,897.34

TOLS004517

# KOPPERS

## Interoffice Correspondence

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From R. Simmons

Location \_\_\_\_\_

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### St. Louis, Missouri Major Shipments Continued

Frankfort Arsenal	Aberdeen, Maryland	
Woodtox #1	4 X 55 Gal	459.80
Woodtox #2	4 X 55 Gal	367.40
Woodtox 140 RTU #3	4 X 55 Gal	213.40
Coppertreat 110 #4	4 X 55 Gal	279.40
Woodtox P.P. RTU #5	4 X 55 Gal	215.60
		<hr/>
		\$1,535.60

### Balance of Shipments By Product Totals

Woodtox 140 Conc.	10 X 55 Gal	1402.50
Woodtox 140 RTU	1202 Gal	769.28
Woodtox 140 RTU	4 X 55 Gal	329.00
Woodtox PrePrime RTU	23 X 55 Gal	1680.25
Woodtox S	10 X 55 Gal	1336.50
Woodtox RTU	8 X 55 Gal	792.00
Woodtox RTU	35 X 5 Gal	376.25
Woodtox RTU	50 X 6 X 1 Gal	780.00
Penta Wood Pres. Conc	8 X 55 Gal	1402.50
Penta Wood Pres. Conc	115 X 5 Gal	1729.15
Penta Wood Pres. Conc	53 X 6 X 1 Gal	1142.40
Penta Wood Pres. RTU	12 X 55 Gal	946.00
Penta Wood Pres. RTU	175 X 5 Gal	1487.50
Penta Wood Pres. RTU	68 X 6 X 1 Gal	836.40
Liquid Noxtane SS1	1 X 55 Gal	233.75
Coppertreat 120 RTU	6 X 55 Gal	689.70
Anstrik S/B Green	1 X 55 Gal	164.45
End Sealer Clear	3 X 55 Gal	445.50
End Sealer Red	1 X 55 Gal	162.25

TOLS004518

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

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### Balance of Shipments By Product Totals Continued

KLB Beam Sealer	20 X 55 Gal	1568.60
LST Co-Solvent II	16 X 435 #	1357.20
Timbertreat 625	10 X 5 Gal	171.00
B. Wood Pres.	202 X 5 Gal	1395.00
B. Wood Pres.	54 X 6 X 1 Gal	625.32
Polelife T.F.	43 X 50 #	701.68
Super Noxtane	10 X 50 #	185.00
Super Diprite	55 X 50 #	1055.00
Santobrite Briquettes	10 X 100 #	530.00
Penta Tration Dye	60 #	214.80
Penta Stain #501	2 X 5 Gal	31.50
Penta Stain #502	13 X 5 Gal	207.25
Penta Stain #502	12 X 4 X 1 Gal	177.12
Penta Stain #502	2 X 12 X 1 Quart	38.40
Penta Stain #503	3 X 5 Gal	46.75
Penta Stain #503	1 X 4 X 1 Gal	14.32
Penta Stain #504	1 X 4 X 1 Gal	14.32
Penta Stain #505	3 X 5 Gal	48.75
Penta Stain #506	20 X 5 Gal	325.00
Penta Stain #506	27 X 4 X 1 Gal	399.60
Penta Stain #506	5 X 12 X 1 Quart	96.00
Penta Stain #507	5 X 5 Gal	81.85
Penta Stain #507	4 X 4 X 1 Gal	59.20
Penta Stain #508	2 X 4 X 1 Gal	29.60
Penta Stain #509	5 X .55 Gal	783.75
Mineral Spirits	1 X 5 Gal	4.00

TOLS004519

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date June 3, 1974

Page 11

### Penta Invoicing for Month

Koppers	\$183, 782.69
Customers	\$185, 454.08

\$363, 236.77 (Up \$49, 000 From same month 1973)

### W T C Products Invoiced for Month

\$345, 502.54 (Up \$192, 000 from same month 1973)

## II. Raw Materials

The following raw materials and containers have increased:

Mineral Spirits (Cotton Valley)	to .275 Gal.	Eff 6/1 (Up .02)
Diethyl Ethanolamine	to .655 Lb.	Eff 5/23 (Up .17)
Rule 66 Mineral Spirits	to .345 Gal	Eff 6/1 (Up .03)
Yellow Pigment X-3492	to 1.15 Lb.	Eff 6/1 (Up ,25)
Filtrez 70	to .275 Lb.	Eff 6/1 (Up .025)
T. H..55 Gal. Drums	to 10.55	Eff 6/1 (Up .68)
Agitator 55 Gal Drums	to 13.30 Ea	Eff 6/1 (Up .68)
Kolineum	to .90 Gal	Eff 6/1 (Up .10)
Acetone	to .2125 Lb.	Eff 6/1 (Up .0275)

Availability of a wide range of materials, containers and operating supplies continues to present Day-To-Day problems, and to attempt a complete listing of items that are short, would require more space than available here. In general, we expect all materials and containers to continue to raise in cost.

TOLS004520

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date June 3, 1974

Page 12

Monsanto is out of Penta production again for the first week of June. We expect this to severely hamper, if not close down entirely, several customers plants, possibly Grenada and Salisbury FPD Plants, and limit W T C production, as well.

### III. Inventory

Richmond - Only about 17,000 Gal remains on hand. We have no orders for this by should have no problem in closing out within two weeks.

Houston - Recent marketing decisions by one resale product supplier has made it possible to stock most of this warehouse's material in St. Louis. This location will probably be eliminated soon as stock depletes.

Copper Naphthenates - Several small drum orders have moved this month. One good-sized T/L of material remains.

Color Seal - Materials all remain in inventory without movement.

### IV. Profit Opportunities

So many cost changes have been evident in the past week that a complete updating is being done again; sales prices will need to reflect these increases.

### V. Assistance Requirements

1. More Penta is needed. We are deluged with order and inquiries. Monsanto is just barely making 1,250,000 pounds per month and this is not staying up with demand. June is the first month that Dow has promised a reasonable amount (120,000) to the Koppers plants, but even so, it is a case of 'not enough, too late!'

TOLS004521

BZTO104(e)041342

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date June 3, 1974

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### 2. Purchasing Help

We are getting needed fuel oil for St. Louis, but it is not on the Federal Allocation Program and will be cut off again this winter.

Same situation will exist this winter with regard to supplying Superior's needs.

### VI. General Comments

Sales prediction for June, \$750, 000, barring a prolonged Penta shutdown.

We expect Penta problems to continue with the advent of continued Phenol shortages and talk of government Chlorine allocation to provide for water supplies.

### VII. Travel Plans

June 6 and 7 - Vacation

June 20 and 21 - St. Mary's Hospital, St. Louis

June 24 - 27 - Holding open for inventory checking

R. Simmons

RFS/sjk

TOLS004522

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
T. Onett  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To H. B. Putman From R. F. Simmons  
Location Pittsburgh, PA K/1000 Location St. Louis, Missouri  
Subject Monthly Report - November 1974 Date November 27, 1974  
Wood Treating Chemicals Operations

### I. Shipment Highlights - (November Accounting Month)

#### 1. Camden, New Jersey Warehouse 9 Sales Total For Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Penta Wood Pres. Conc.	4 X 55 Gal.	220 G.	874.50
Penta Wood Pres. R TU	1 X 55 Gal.	55 G.	77.00
Penta Stain #509	2 X 55 Gal.	110 G.	385.00
Woodtox 140 Conc.	14 X 55 Gal.	770 G.	2,233.00
Woodtox Pre Prime Cone.	2 X 55 Gal.	110 G.	326.70
Woodtox Pre Prime R TU	5 X 55 Gal.	275 G.	457.88
Woodtox R TU	1 X 55 Gal.	55 G.	110.00
Woodtox R TU	3 X 5 Gal.	15 G.	38.25
Woodtox R TU	9 X 6 X 1 Gal.	54 G.	162.00

#### 2. Enfield, North Carolina Warehouse 4 Sales Total For Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Lumbrella 12 Red Brown	4 X 53 Gal.	212 G.	795.00
Green End Spray 400	2 X 55 Gal.	110 G.	792.00
Wood Seal Wax	8 X 426 Lbs.	3408 #	1,260.96
Super Nextane	20 X 50 Lbs.	1000 #	470.00

#### 3. Newark, California Warehouse - By Customer

McCormick & Baxter	Diamond Spring, California	
Liquid Nextane SS I	1 X 55 Gal	275.00
Saider Lumber Company	Turlock, California	
Liquid Nextane SS I	10 X 55 Gal.	2,585.00

TOLS004523

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 27, 1974

Page 2

### Newark, California Warehouse - By Customer Continued

Cascade Industrial Supply	Redding, California	
Liquid Noxtane SS 1	3 X 345 Gal.	3,870.90
Liquid Noxtane SS 1	15 X 55 Gal.	3,085.50
Liquid Azide 200	6 X 55 Gal.	1,795.20
		<hr/>
		8,751.60

### 4. Tuscaloosa, Alabama Blender - By Customer

#### Woodtox 140 R.T.U. - Bulk

Holman Wood Products Northport, Alabama	4229 Gal.	3,594.65
Cottondale Wood Products Tuscaloosa, Alabama	2712 Gal.	2,305.20
Tusco Wood Products Tuscaloosa, Alabama	7989 Gal.	6,790.65
Talladega Box and Lumber Talladega, Alabama	5970 Gal.	4,716.30
Norman Treating Co. Goshen, Alabama	4956 Gal.	4,211.60

### 5. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 R.T.U. - Bulk

Bibier Bros. Lumber Clarksville, Arkansas	6124 Gal.	5,205.40
--	-----------	----------

TOLS004524

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmens  
Location \_\_\_\_\_  
Date November 27, 1974

Page 3

### Cotton Valley, Louisiana Blender - By Customer Continued

Lear Siegler, Inc. 7968 Gal. 6,772.80  
Arcadia, Louisiana

Texas Container & Box 5962 Gal. 5,067.70  
Texarkana, Texas

Bennett Box Company 5976 Gal. 5,079.60  
Texarkana, Texas

### 6. Minneapolis, Minnesota Blender - Total

Timbertox 7 1/2%

Koppers Superior Plant 30079 Gal. 20,453.72

### 7. Portland, Oregon Blender - By Customer

B & F Box and Lumber Co. Woodtox 140 RTU  
Los Alamitos, California 4012 Gal. 3,410.20

Jasco Chemical Co. Woodtox 140 Conc.  
Mt. View, California 2980 Gal. 4,917.00

Great Western Chemical Timbertox 40 Conc.  
Bonners Ferry, Idaho 3054 Gal. 6,321.78

J. H. Baxter Company Anstrik Sagebrush Green  
Eugene, Oregon 2 X 55 Gal. 363.00

Potlatch Forest Inc. Woodtox 140 R T U  
Lewiston, Idaho 7183 Gal. 6,105.55

TOLS004525

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 27, 1974

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### 8. St. Louis, Missouri

Penta	(Calendar November Month)	Shipments
F P D Plants		577, 413
Customers		605, 537
W T C		251, 150
	Total	1,434, 100 Lbs.

W T C Products	-	Major Shipments - By Customer
Koppers Company, Inc.		Charleston, South Carolina
W T C #71	6 X 51#	2,039.40
W T C #7-11	6 X 39 #	159.12
		2,198.52

Chemical Specialties	Valdosta, Georgia	
Liquid Noxtane SS 1	60 X 55 Gal.	13,365.00
Santobrite Pellets	20 X 100 #	2,600.00
		15,965.00

Universal Coop	York, Pennsylvania	
Penta Wood Pres. Conc.	3972 Gal	9,731.40

Elco Manufacturing Co.	Sharpsburg, Pennsylvania	
Woodtox Pre-Prime Conc.	3967 Gal.	9,322.45

Milan Box Corporation	Milan, Tennessee	
Woodtox 140 R T U	5933 Gal.	5,043.05

Dyer Fruit Box	Dyer, Tennessee	
Woodtox 140 R T U	5982 Gal.	5,084.70

TOLS004526

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date November 27, 1974

Page 5

### W T C Products, Major Shipments Continued

Bennett Box Company Woodtox 140 RTU	Centerville, Iowa 5433 Gal.	4,618.05
J. H. Baxter LST Co-Solvent II	Eugene, Oregon 31802 #	4,547.69
Federal Chemical Penta Stain Base Conc.	Indianapolis, Indiana 20 X 55 Gal.	4,235.00
Indiana Creoseting Timbertox D-5	Bloomington, Indiana 5832 Gal.	3,615.84
R. J. Bond Timbertox D-5	Carmi, Illinois 5752 Gal.	3,566.24
Great Lakes Manufacturing Woodtox Pre Prime R TU	Ladysmith, Wisconsin 4057 Gal.	3,326.74
Kansas Box and Lumber Woodtox 140 RTU	Independence, Kansas 5874 Gal.	4,992.90
Asplundh Tree Expert Polex F	Houston, Texas 24 X 280 #	2,580.48
Malta Manufacturing Co. Woodtox Pre Prime R TU	Malta, Ohio 30 X 55 Gal.	2,475.00
Vetter Manufacturing Co., Woodtox Pre Prime R TU	Stevens Point, Wisconsin 2516 Gal.	2,063.12
General Box Company Woodtox 140 RTU	E. St. Louis, Illinois 1057 Gal.	1,004.15

TOLS004527

# KOPPERS

## Interoffice Correspondence

To R. B. Palmer

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 27, 1974

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### W T C Products, Major Shipments Continued

Bell Lumber Company	New Brighton, Minnesota	
Petroset II	4 X 460 #	1,416.80
Standard Tar Products	Milwaukee, Wisconsin	
Penta Stain #502	3 X 55 Gal	577.50
Penta Stain #506	5 X 55 Gal	962.50
		<u>1,540.00</u>
W. C. Alexander	Mt. Vernon, Illinois	
Penta Wood Pres. R TU	40 X 5 Gal	430.00
Penta Wood Pres. R TU	120 X 6 X 1 Gal	1,872.00
		<u>2,302.00</u>
Crown Chemicals	St. Louis, Missouri	
Penta Wood Pres. Conc.	3 X 55 Gal.	587.40
Penta Wood Pres. Conc.	25 X 5 Gal.	500.00
Penta Wood Pres. Conc.	10 X 6 X 1 Gal.	267.60
Timbertreat 625	1 X 55 Gal.	280.50
		<u>1,635.50</u>

### Balance of Shipments - By Product Totals

Woodtex 140 R TU	9 X 55 Gal.	764.50
Woodtex Pre Prime Conc.	1 X 55 Gal.	181.50
Woodtex Pre Prime R TU	2 X 55 Gal.	203.50
Woodtex 152	2 X 55 Gal.	209.00
Woodtex R TU	12 X 5 Gal.	153.00
Woodtex R TU	8 X 6 X 1 Gal.	144.00
Penta Wood Pres. Conc.	5 X 55 Gal.	1,047.75
Penta Wood Pres. Conc.	50 X 5 Gal.	812.50

TOLS004528

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 27, 1974

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### Balance of Shipments - By Product Totals Continued

Penta Wood Pres. R TU	62 X 5 Gal.	666.50
Penta Wood Pres. R TU	49 X 6 X 1 Gal.	764.40
Color Coat P	1 X 53 Gal.	651.90
Color Coat D	1 X 53 Gal.	474.35
Timbertreat 625	1 X 55 Gal.	247.50
Liquid Noxtane SS 1	3 X 55 Gal.	742.50
Clear End Sealer	2 X 55 Gal.	297.00
K L B Beam Sealer	8 X 55 Gal.	792.00
Penta Stain #509	5 X 55 Gal.	962.50
Santobrite #2 Fines	20 X 100 #	1,120.00
Polelife TB	4 X 50 #	106.00
WTC #71	4 X 515 #	1,442.00
Coppertreat 120 R TU	2 X 5 Gal.	23.30
Wood Sealer Linseed Oil	4 X 5 Gal.	60.00
B Wood Pres.	6 X 5 Gal.	49.50
B Wood Pres.	22 X 6 X 1 Gal.	316.80
Woodtreat AA	144 X 5 #	610.50
Woodtreat AA	10 X 40 #	228.00
Woodtreat AA	2 X 4 X 1 Gal.	37.80
Penta Check	4 X 1/2 Pts.	11.96
Penta Traction	1 X 2 #	7.16
NTA NA 3 Crystals	1 X 50 #	37.50

### Penta Invoicing for November Accounting Month

Koppers Plants	\$230,312
Customers	259,544

**\$489,856 (Up \$291,719 from same month 1973)**

### WTC Products Invoicing for November Accounting Month TOLS004529

**\$209,581 (Up \$121,130 from same month 1973)**

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date November 27, 1974

Page 8

### II. Raw Materials

Most materials are becoming cost stabilized, the only exceptions being pigments, oil additives, berax products and basics, such as chlorine, where shortages still exist.

As of this writing (November 27), we are having little difficulty with supply of raw materials; if fact, our only material we are not getting in sufficient supply is the Ketone Bottom co-solvent. We are expecting this to change shortly. Bob Arsenault has advised WK - 55 will continue to be supplied, but Dow-Badische has not internally so instructed their people yet. In the interim, we have a 6-8 week supply on hand and do expect to hear that clearance for the continued supply has been approved.

Through the first eleven months of 1974, Monsanto has shipped 13,087,575 Lbs. Penta, of which we supplied phenol for 1,570,740 Lbs. and chlorine for 964,286 lbs. Our selling position at .42 for Monsanto supplied product (and higher for product for which we are supplying some of the material), is now hurting our sales. Unless Vulcan raises their price, we will be loosing some December sales to them; as well, they have not been experiencing any product shortage and have been making a lot of contacts in the South with our customers. For the first time in 1 1/2 years Monsanto has a 300,000 Lb. inventory today and we expect this to grow considerably by year-end on the basis of the December orders we now have booked (739,000 Lbs.).

It has been a very fast material turn-around the chemical industry has experienced in the last two weeks and we anticipate competitive situations shortly, will develop because of slow sales and oversupply of products.

### III. Inventory

While we have some sizeable stocks of materials, nothing can be considered excessive.

TOLS004530

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmers  
Location \_\_\_\_\_  
Date November 27, 1974

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### IV. Profit Opportunities

Woodtoxes continue to sell the best. Slumping lumber markets have all but discontinued Nextane and Azide sales.

### V. Assistance Requirements

Same as October.

1. Secure alternate penta source and get our penta pricing competitive without loosing our commission.
2. Continued search for inexpensive co-solvents.

### VI. General Comments

#### December Sales Forecast

Penta	\$450,000
WTC	\$250,000

Lumbrella packaging machinery will be delivered about 12/15. Installation will begin quickly.

Storage tank diking is proceeding as weather will permit. The next month will be spent primarily moving pipes to above floor line.

### VII. Travel Plans (Tentative)

December 3-4  
December 5  
December 11-12  
December 26-27-30-31

Newark, California  
Portland, Oregon  
Pittsburgh, Pennsylvania  
Vacation

TOLS004531

October 14, 1974

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117 - St. John's Station  
Portland, Oregon 79203

Dear Neil:

For the record, we are confirming our verbal instructions of last Wednesday to you:

To the 310 Gallons of Timbertox 40 Concentrate in the kettle and the 360 gallons in drums (which should be returned to the kettle), add 1700 pounds (221 Gallons) KB-21 and 1375 pounds Penta. Reheat to 180° F minimum and circulate at least an hour to make homogenous.

The sample of this Timbertox 40 was air-mailed Thursday and we have rushed analysis on it, only to find it still low in Penta. We called Candy in your absence at noon and left word for you to reheat the product to 180° F, add 300# more Penta and circulate and continue heating two more hours. Assuming this rework proves satisfactory, you will find attached a new formula for Timbertox 40. You will note this one calls for 7.3% more KB-21 and should provide lots better penta solvency than the old formula. Please remove the old formula from your book and destroy it.

In a small 'Mailer Envelope' Harold has sent a rubber stamp that denotes your plant EPA Establishment Number. As per our September 9 letter again be cautioned that all EPA registered products must also show this establishment number on every container shipped on or after October 21, 1974. This stamp will allow you to stamp the number on until such time as we get properly

TOLS004532

BZTO104(e)041353

**Mr. Neil Gallagher**  
**Page 2**  
**October 14, 1974**

**printed labels to you; note proper placement of this on the  
labels attached.**

**If there are any questions, please call.**

**Best Regards,**

**R. F. Simmons  
Operations Manager**

**RFS/sjk**

**Attachment**

**cc: A. Guzman  
H. Struessel**

**TOLS004533**

**BZTO104(e)041354**

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
T. Onett  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1000

Location St. Louis, Missouri

Subject Monthly Report - September 1974  
Wood Treating Chemicals Operations

Date October 4, 1974

### I. Shipment Highlights - (September Accounting Month)

#### 1. Houston, Texas Warehouse

1 Sale Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
WTC # 71	2 X 515 #	1030 #	721.00

(Houston Warehouse Now Closed.)

#### 2. Camden, New Jersey Warehouse

13 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Penta Wood Pres. Conc.	19 X 55 Gal	1045 G	3646.50
Penta Wood Pres. RTU	1 X 55 Gal	55 G	90.75
Penta Wood Pres. RTU	8 X 55 Gal	40 G	74.00
Woodtox Pre Prime Conc.	2 X 55 Gal	110 G	313.50
Woodtox RTU	1 X 5 Gal	5 G	11.75
Woodtox RTU	81 X 6 X 1 Gal	486 G	1360.80
Liquid Noxtane SS1	1 X 55 Gal	55 G	233.75

#### 3. Enfield, North Carolina Warehouse

9 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Liquid Noxtane SS1	7 X 55 Gal	385 G	1636.25
Lumbrella 33 Redwood	27 X 3 Gal	81 G	668.25
Lumbrella 15 Yellow	9 X 53 Gal	477 G	1717.20
Lumbrella 15 Redwood	4 X 53 Gal	212 G	763.20
Timbertreat 625	2 X 55 Gal	110 G	434.50
Timbertreat 625	1 X 5 Gal	5 G	21.00
Super Noxtane	40 X 50 #	2000 #	840.00

TOLS004534

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

Page 2

### 4. Newark, California Warehouse - By Customer

Munnell & Sherrill	Arcata, California	
Liquid Noxtane SS 1	2 X 345 Gal	2287.35
Liquid Noxtane SS 1	15 X 55 Gal	2734.88
Clear End Sealer	10 X 55 Gal	771.38
Blue End Sealer	1 X 55 Gal	86.49
Orange End Sealer	4 X 55 Gal	345.95
		6226.05

Wasatch Chemical	Salt Lake City, Utah	
Timbertox 40 Conc.	36 X 55 Gal	5940.00
Cascade Industrial Supply	Redding, California	
Liquid Noxtane SS 1 ]	3 X 345 Gal	3431.03
Liquid Noxtane SS 1	16 X 55 Gal	2917.20
Liquid Azide 200	5 X 55 Gal	1753.13
		8101.35

Munnell & Sherrill	Medford, Oregon	
Liquid Noxtane SS 1	20 X 55 Gal	4009.50

### 5. Tuscaloosa, Alabama Blender - By Customer

Woodtox 140 R TU - Bulk		
International Wooden Cont.	3950 Gal	2962.50
Ardmore, Tennessee		
Cottondale Wood Products	546 Gal	409.50
Tuscaloosa, Alabama		

TOLS004535

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date October 4, 1974

Page 3

### Tuscaloosa, Alabama Blender - By Customer Continued

Norman Treating Company Goshen, Alabama	4944 Gal	3708.00
Tusco Wood Products Tuscaloosa, Alabama	7968 Gal	6371.70
Talladega Box and Lumber Talladega, Alabama	5929 Gal	4446.75

### 6. Cotton Valley, Louisiana Blender - By Customer

Woodtox 140 R TU - Bulk		
B & F Manufacturing Co. Ashdown, Arkansas	6010 Gal	4507.50
Lear Sigler Corporation Arcadia, Louisiana	7330 Gal	5497.50
Bennett Box Company Texarkana, Texas	5861 Gal	4395.75
Great Southern Wirebound Magnolia, Mississippi	7054 Gal	5290.50
S & W Industries Fort Smith, Arkansas	5850 Gal	4972.50
Bibler Bros Lumber Co. Clarksville, Arkansas	5967 Gal	4475.25

TOLS004536

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmens

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

Page 4

### Cotton Valley, Louisiana Blender - By Customer Continued

Texas Container & Box Co. 5852 Gal  
Texarkana, Texas

4974.20

Ozark Box & Crating Co. 11995 Gal  
Caney, Kansas

8996.25

### 7. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant 41642 Gal Timbertox 7 1/2% 27364.20

### 8. Portland, Oregon Blender - By Customer

Willard Products WR 340 Conc.  
Redwood City, California 6 X 408 # 438.19

J. H. Baxter Petroset II  
Eugene, Oregon 10 X 460 # 2530.00

Anstrik S/B Green  
2 X 55 Gal 328.90

2858.90

Beaver Lumber Company Woodtox 140 R TU  
Santa Clara, California 2013 Gal 1509.75

Munnell & Sherrill Woodtox Pre Prime R TU  
Arcata, California 3448 Gal 2930.80  
2 X 55 Gal 93.50

3024.30

TOLS004537

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

Page 5

### Portland, Oregon Blender - By Customer Continued

Cascade Industrial Supply Klamath Falls, Oregon	Woodtox 140 R TU 5 X 55 Gal	396.00
Kinnear Door Company Centralia, Washington	Woodtox 140 R TU 10 X 55 Gal	797.50

### 9. St. Louis, Missouri

Penta	(Calendar September Month)	Shipments
F PD Plants	630,643	
Customer's	531,240	
W T C	80,500	
Total	1,242,383	

### W T C Products - Major Shipments - By Customer

Bennett Box Company Woodtox 140 R TU	Centerville, Iowa 18095 Gal	14144.45
Kansas Box and Lumber Woodtox 140 R TU	Independence, Kansas 5968 Gal	5072.80
New Idea Division Woodtox 140 R TU	Coldwater, Ohio 4068 Gal	3457.80
Hood Lumber Company Penta Wood Pres. Conc.	Hattiesburg, Mississippi 3969 Gal	9327.15
Hurd Millwork Woodtox Pre Prime R TU	Medford, Wisconsin 5899 Gal	4247.28
Jordan Company, Inc. Timbertox D-5	Memphis, Tennessee 4012 Gal	2427.26

TOLS004538

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

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### W T C Products, Major Shipments Continued

Weyerhaeuser Company SPS 30% Solution	Craig, Oklahoma 10801 Gal	12529.16
Caribbean Lumber Company Super Noxtane	Savannah, Georgia 250 X 100 #	12000.00
Lyntegar Elec Coop Penta Wood Pres. Conc	Taboka, Texas 10 X 55 Gal	1815.00
Graybar Electric Penta Wood Pres. Conc.	Columbus, Ohio 10 X 55 Gal	1724.25
Brunson & Son Post Mill Penta Wood Pres. Conc.	Arcadia, Louisiana 10 X 55 Gal	1815.00
Van Horn & Metz Company Penta Wood Pres. Conc.	Conshohocken, PA 20 X 55 Gal	3267.00
Farmers Union Central Penta Wood Pres. Conc. Penta Wood Pres. Conc.	West Billing, Montana 450 X 5 Gal 40 X 6 X 1 Gal	7312.50 900.00
Farmers Union Central Penta Wood Pres. Conc. Penta Wood Pres. Conc.	St. Paul, Minnesota 40 X 6 X 1 Gal 35 X 5 Gal	900.00 568.75
		9681.25
Seima Pressure Treating L S T Co-Solvent II	Selma, California 40 X 435 #	3393.00

TOLS004539

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

Page 7

### WTC Products, Major Shipments Continued

Asplundh Tree Expert	Willow Grove, PA	
Polelife T.F.	90 X 50 #	1764.00
E TC Chemical Co,	Hattiesburg, Mississippi	
Lumbrella 33 Cherry Tone	54 X 3 Gal	882.10
Lumbrella 33 Redwood	54 X 3 Gal	882.09
		1764.19
Tremont Lumber Company	Winnfield, Louisiana	
Lumbrella 15 Green	24 X 53 Gal	4452.00
Louisiana Pacific Corp.	Winnfield, Louisiana	
Lumbrella 12 Green	24 X 53 Gal	4515.60
Chemical Specialties	Valdosta, Georgia	
Liquid Noxtane SS1	40 X 55 Gal	7425.00
Lumbrella 33 Yellow	432 X 3 Gal	7056.72
Lumbrella 12 Red Brown	8 X 53 Gal	1087.56
Timbertreat 625	2 X 55 Gal	386.10
Green End Spray 400	5 X 55 Gal	1707.75
Penta Wood Pres. Conc.	10 X 5 Gal	162.00
NATA - NA3 Crystals	1 X 50 #	33.75
		17858.88

TOLS004540

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

Page 8

### Balance of Shipments By Product Totals

Woodtox 140 R TU	5 X 55 Gal	440.00
Woodtox Pre Prime Conc.	2 X 55 Gal	313.50
Woodtox Pre Prime R TU	3 X 55 Gal	272.25
Woodtox R TU	15 X 5 Gal	176.25
Woodtox R TU	47 X 6 X 1 Gal	789.60
Timbertox D-5	23 X 55 Gal	1302.95
Penta Wood Pres. Conc.	15 X 55 Gal	2887.50
Penta Wood Pres. Conc.	54 X 5 Gal	1104.00
Penta Wood Pres. Conc.	26 X 6 X 1 Gal	717.60
Penta Wood Pres. R TU	75 X 5 Gal	693.75
Penta Wood Pres. R TU	23 X 6 X 1 Gal	323.20
Clear End Sealer	2 X 55 Gal	297.00
Green End Sealer	1 X 55 Gal	159.50
Wood Seal Wax	1 X 40 #	15.75
Coppertreat 80 Conc	2 X 55 Gal	479.60
Polelife T.F.	10 X 50 #	245.00
B Wood Pres.	20 X 5 Gal	165.00
B Wood Pres.	32 X 6 X 1 Gal	460.80
Woodtreat AA	20 X 40 #	364.80
Woodtreat AA	99 X 5 #	429.30
Woodtreat AA Guns	3 Each	107.64
WTC #74 Floc. Agent	2 X 460 #	460.00
Lumbrella 33 Yellow	27 X 3 Gal	490.05
Super Noxtane	40 X 50 #	820.00
Super Diprite	60 X 50 #	1080.00
Penta Stain #502	8 X 5 Gal	144.00
Penta Stain #506	10 X 4 X 1 Gal	162.50
Penta Stain #509	1 X 55 Gal	192.50

TOLS004541

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date October 4, 1974

Page 9

### Penta Invoicing for Accounting Month

Koppers	\$ 179,951.94
Customers	\$ 238,883.36

**\$ 418,835.30 (Up \$128,671 from same month 1973)**

### WTC Products Invoiced for Accounting Month

**\$ 269,398.03 (Up \$65,566 from same month 1973)**

## II. Raw Materials

Efforts continue to find suitable Co-Solvents for WTC use. One prime candidate is under-going extensive testing. Another was recommended to W. T. Henry this month for treating plant use when it proved unsatisfactory for our use. Availability and pricing secured on over 50 candidates this month.

A half-cent fuel oil increase was effective October 1; availability has not been a problem yet. St. Louis mineral spirits was increased an average of .02 per gallon by all the suppliers in the past month, but this has now backed off to a net .005 increase. Specialty chemicals including our red pigments, biphenyl and tall oil fatty acids are continuing upward in cost.

We are encountering supply problems on Borax products, Citric Acid and Ethylene Glycol but are not out nor uncomfortable at the moment. We

TOLS004542

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 4, 1974

Page 10

are however out of Thalo Green dispersion from Cal-Ink and precariously low on Thalo Blue. This stops all production of Green End Spray 400 and Brewton Green Lumbrella, as well as jeopardizing Tremont Green Lumbrella and the proposed Blue Anstriks for Koppers.

It is apparent Monsanto will not live up to its 15 million pound commitment on Penta. Nine month totals on shipment are:

Koppers Plants	4,904,097
Customers	5,072,535
Wood Treating	923,883
	<hr/>
	10,900,515

But to be deduced from this is material we have supplied - chlorine for 571,200 Lbs. and phenol for 1,570,740. We have purchased (and are committed to) chlorine for another 1,178 000 lbs of penta; this will be delivered thru February 1975.

### III. Inventory

Excess stock of color seal materials remain on hand.

### IV. Profit Opportunities

Cost standards are current and these are now being updated as increases occur. Our selling prices are meeting with some customer resistance; Woodtox 140 sales from Cotton Valley and Tuscaloosa appear to be off a little in the past two weeks, although there has not been enough time to really tell since our last increase.

TOLS004543

# KOPPERS

## Interoffice Correspondence

To R. H. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date October 4, 1974

Page 11

Considerable resistance has been met on the Penta selling price needed to cover our higher prices raw materials.

Our application for equipment expenditure to package Lumbrella 33 is submitted. When installed we expect to reduce costs .50 gallon on this product.

### V. Assistance Requirements

1. Contract for Chlorine purchase for 1975.
2. To our count thru September Dow provided approximately 440,000 lbs. Penta. Increased shipments are still needed as well as an FPD contract for next year.
3. Help on Tenneco, Cal-Ink Division pigments.
4. Co-Solvent candidates for testing.

### VI. General Comments

#### October Sales Forecast

Penta	\$ 450,000
WTC Products	\$ 300,000

### VII. Travel Plans

Pittsburgh Office - October 8

Visit to Camden and Enfield Warehouses - October 16 - 17

R. F. Simmons

RFS/sjk

TOLS004544

September 9, 1974

Neil Gallagher  
Time Oil Company  
P. O. Box 03117 - St. John's Station  
Portland, Oregon 79203

Dear Neil:

A recent request by one of our salesmen is prompting us to write about labels - their custody, use and penalty that can be involved for improper use.

The request we received was to supply labels to a distributor who was repacking bulk material purchased from us. The request, of course, was denied as the EPA view's repacking as manufacturing and the distributor has to secure his own label and plant establishment number. You should therefore be cautioned to not let anyone, including our salesmen, remove labels from your plant that is not applied to product containers or one which is affixed to the Bill of Lading in the case of a bulk shipment.

Beginning October 21, product you produce for us which has an EPA registration number on the label must also contain the establishment number. Those products without the registration number, likewise do not need the establishment number. Please review your label stock and make sure you destroy any label that are not in compliance.

The following product labels should contain neither number: All Anstriks, All Lumbrellas, LST Co-Solvent II, Petroset II, Color Seal, WR 340 Concentrate. All other labels should contain both numbers: Woodtox 140 RTU and Concentrate, Woodtox PrePrime RTU and Concentrate, Timbertox 40 Concentrate. You should have no other labels. It is most important you have only current labels and only those for product you manufacture or have in stock.

If you have any questions, please advise.

Yours truly,

R. F. Simmons

TOLS004545

BZTO104(e)041366

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
T. Onett  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location Pittsburgh, PA K-750  
Subject Monthly Report - August 1974  
Wood Treating Chemicals Operations

From R. F. Simmons  
Location St. Louis, Missouri  
Date August 30, 1974

### I. Shipment Highlights - (August Accounting Month)

#### 1. Houston, Texas Warehouse 2 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
WTC #71	5 X 515 #	2575 #	\$1740.70

#### 2. Camden, New Jersey Warehouse 17 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Penta Wood Pres. Conc	20 X 55 Gal	1100 G	\$3585.50
Penta Wood Pres. Conc.	5 X 6 X 1 Gal	30 G	138.00
Penta Wood Pres. RTU	1 X 55 Gal	55 G	90.75
Penta Wood Pres. RTU	15 X 6 X 1 Gal	90 G	216.00
Woodtox PrePrime RTU	5 X 55 Gal	275 G	409.38
Woodtox 140 RTU	2 X 55 Gal	110 G	176.00
Woodtox RTU	4 X 5 Gal	20 G	47.00
Woodtox RTU	55 X 6 X 1 Gal	338 G	924.00
End Sealer Clear	10 X 5 Gal	50 G	147.50
Super Noxtane	10 X 50 #	500 #	210.00

#### 3. Enfield, North Carolina Warehouse 22 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Liquid Noxtane SS 1	42 X 55 Gal	2310 G	9597.50
Lumbrella 33 Redwood	27 X 3 Gal	81 G	579.15
Lumbrella 15 Redwood	3 X 53 Gal	159 G	572.40
Lumbrella 15 Yellow	20 X 53 Gal	1060 G	3667.60
Timbertreat 625	1 X 55 Gal	55 G	217.25
End Sealer Clear	1 X 55 Gal	55 G	148.50
Wood Seal Wax	20 X 40 #	800 #	368.00

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 30, 1974

Page 2

### Enfield, North Carolina Warehouse Continued

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
End Spray 400 Red	3 X 5 Gal	15 G	117.00
Super Noxtane	40 X 50 #	2000 #	840.00
Santobrite Briquettes	1 X 100 #	100 #	53.00

### 4. Newark, California Warehouse - By Customer

Munnell & Sherrill	Medford, Oregon	
Liquid Azide	5 X 55 Gal	1633.50
Munnell & Sherrill	Eugene, Oregon	
Liquid Noxtane SS 1	55 X 55 Gal	16070.32
End Sealer Clear	2 X 55 Gal	154.28
		16224.60

Great Western	Seattle, Washington	
Red End Sealer	6 X 55 Gal	676.50
Ketchikan Pulp Co.	Ketchikan, Alaska	
Liquid Noxtane SS 1	1 X 55 Gal	233.75
P. B. M. Mill Supply	Chico, California	
Liquid Noxtane SS 1	40 X 55 Gal	7293.00
Liquid Azide	8 X 55 Gal	2337.50
		9630.50

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date August 30, 1974

Page 3

5. Tuscaloosa, Alabama Blender - By Customer

Woodtox 140 RTU - Bulk

Cottondale Wood Products Tuscaloosa, Alabama	3770 Gals	2714.17
Tusco Wood Products Tuscaloosa, Alabama	11811 Gals	8585.19

6. Cotton Valley, Louisiana Blender - By Customer

Woodtox 140 RTU - Bulk

Bibler Bros Lumber Clarksville, Arkansas	5860 Gals	3984.80
Bennett Box Company Texarkana, Texas	6074 Gals	4130.32
Commercial Box Texarkana, Texas	5923 Gals	4442.25
Great Southern Wirebound Texarkana, Texas	5832 Gals	4374.00
Texas Container Texarkana, Texas	5832 Gals	4374.00
<b>7. Minneapolis, Minnesota Blender - Total</b>		
Koppers Superior Plant	41706 Gal	Timbertox 7 1/2%
		26691.77

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 30, 1974

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### 8. Portland, Oregon Blender - By Customer

J. H. Baxter Eugene, Oregon	Anstrik S/B Green 2 X 55 Gal	328.80
B & B Homes Corp. Casper, Wyoming	Woodtox 140 RTU 1 X 55 Gal	88.00
Munnell & Sherrill Eugene, Oregon	Lumbrella 15 Clear 2 X 55 Gal	224.40
Cascade Wood Products White City, Oregon	Woodtox 140 RTU 1961 Gal	1470.75
	Woodtox Pre Prime RTU 4407 Gal	3745.95
		5216.70
Auburn Millwork Auburn, California	Woodtox 140 RTU 5859 Gal	4394.25
Dant & Russell Inc. Portland, Oregon	Woodtox 140 RTU 7126 Gal	5344.50
Great Western Chemical Seattle, Washington	Woodtox 140 RTU 2923 Gal	2192.25
Great Western Chemical Spokane, Washington	Timbertox 40 Conc. 2506 Gal	4849.11
	Woodtox 140 RTU 4124 Gal	3093.00
		7942.11

TOLS004549

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date August 30, 1974

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### 9. St. Louis, Missouri

#### Penta (calendar August Month)

FPD Plants	702,099
Customers	811,186
W T C	155,790
<hr/>	
Total	1,669,075

#### W T C Products      Major Shipments - By Customer

J. R. Ginn Woodtox 140 RTU	St. Louis, Missouri 3837 Gal	2609.16
Brainerd Wood Prod. Woodtox 140 RTU	Brainerd, Minnesota 5897 Gal	4009.96
Kansas Box and Lumber Woodtox 140 RTU	Independence, Kansas 5865 Gal	4398.75
Bennett Box Company Woodtox 140 RTU	Centerville, Iowa 5624 Gal	4218.00
Bennett Box Company Woodtox 140 RTU	Clinton, Iowa 5035 Gal	3776.25
Vetter Mfg. Company Woodtox Pre-Prime RTU	Stevens Point, Wisconsin 2347 Gal	1709.28
Lincoln Wood Products Woodtox Pre-Prime RTU	Merrill, Wisconsin 5863 Gal	4221.36
Weather Shield Mfg Woodtox Pre-Prime RTU	Medford, Wisconsin 4013 Gal	2889.36

TOLS004550

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

Page 6

From R. F. Simmons

Location \_\_\_\_\_

Date August 30, 1974

### St. Louis, Missouri Major Shipments Continued

R. J. Bond Lumber Co Penta Wood Pres. RTU	Carmi, Illinois 11782 Gal	6505.46
Hood Lumber Company Penta Wood Pres. Conc	Hattiesburg, Mississippi 3965 Gal	9317.75
Universal Coop Penta Wood Pres. Conc	Alliance, Ohio 3933 Gal	9242.55
Saunders Supply Penta Wood Pres. Conc	Chuckatuck, Virginia 3823 Gal	8984.05
Indiana Creosoting Timbertox D-5	Bloomington, Indiana 5704 Gal	3450.92
Weyerhaeuser Company SPS 30% Solution	Craig, Oklahoma 7735 Gal	8121.75
Txco Timber Inc. Penta Wood Pres. Conc	Trinidad, Colorado 10 X 55 Gal	1815.00
Federal Chemical Co. Woodtox Pre-Prime Conc.	Indianapolis, Indiana 20 X 55 Gal	2475.00
E T C Chemical Company Timbertox 625 Liquid Noxtane Lumbrella 33 Yellow	Hattiesburg, Mississippi 3 X 55 Gal 3 X 55 Gal 486 X 3 Gal	542.03 556.88 7938.81
		9037.72

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 30, 1974

Page 7

### St. Louis, Missouri Major Shipments Continued

New England Log Homes  
Woodtox 140 RTU  
Woodtox RTU

Great Barrington, Mass  
58 X 55 Gal  
30 X 5 Gal

4147.00  
352.50

4499.50

Chemical Specialties  
Lumbrella 12 Red/Brown  
Lumbrella 33 Yellow  
Liquid Noxtane SS II  
Green End Spray 400  
Santobrite #2 Fines  
Nata-NA 3 Crystals

Valdosta, Georgia  
20 X 53 Gal  
432 X 3 Gal  
20 X 55 Gal  
10 X 55 Gal  
20 X 100 #  
1 X 50 #

2957.40  
7056.72  
3712.50  
3118.50  
950.00  
33.75

17838.87

Georgia Pacific Company  
Lumbrella 33 Yellow

Dudley, North Carolina  
488 X 3 Gal

8857.20

Koppers Company, Inc.  
WTC #71  
WTC #7-11

Charleston, South Carolina  
6 X 515 #  
6 X 39 #

2039.40  
135.72

2175.12

Kay Enterprises  
Penta Stain #504

Janesville, Iowa  
10 X 55 Gal

1732.50

TOLS004552

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmoas  
 Location \_\_\_\_\_  
 Date August 30, 1974

Page 8

### St. Louis, Missouri Major Shipments Continued

Crown Chemicals	St. Louis, Missouri	
Coppertreat 120 RTU	2 X 55 Gal	183.92
Penta Wood Pres. Conc	10 X 55 Gal	2035.00
Penta Wood Pres. Conc	25 X 5 Gal	472.50
Penta Wood Pres. Conc	5 X 6 X 1 Gal	124.20
Penta Wood Pres. RTU	15 X 5 Gal	138.75
Penta Wood Pres. RTU	15 X 6 X 1 Gal	216.00
Woodtox RTU	10 X 6 X 1 Gal	168.00
		3338.37

### Balance of Shipments By Product Totals

Woodtox 140 Conc	6 X 55 Gal	924.00
Woodtox 152 RTU	4 X 55 Gal	418.00
Woodtox PrePrime RTU	5 X 55 Gal	453.75
Woodtox RTU	96 X 5 Gal	1168.00
Woodtox RTU	46 X 6 X 1 Gal	772.20
Penta Wood Pres. Conc	11 X 55 Gal	2150.50
Penta Wood Pres. Conc	75 X 5 Gal	1337.50
Penta Wood Pres. Conc	8 X 6 X 1 Gal	220.80
Penta Wood Pres. RTU	12 X 6 X 1 Gal	172.80
Timbertreat 625	6 X 55 Gal	1276.00
Timbertreat 625	6 X 5 Gal	126.00
WR 340 Conc	10 X 408 #	730.32
KLB Beam Sealer	20 X 55 Gal	1760.00
KLB Beam Sealer	5 X 5 Gal	56.25
Clear End Sealer	2 X 55 Gal	297.00
Wood Seal Wax	1 X 426 #	166.14
Coppertreat 110 RTU	2 X 55 Gal	124.30
B Wood Pres.	15 X 5 Gal	121.25
B Wood Pres.	34 X 6 X 1 Gal	489.60

TOLS004553

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date August 30, 1974

Page 9

### Balance of Shipments By Product Totals Continued

Lumbrella 15 Yellow	2 X 53 Gal	372.06
Penta Stain #502	11 X 5 Gal	198.00
Penta Stain #502	21 X 4 X 1 Gal	340.20
Penta Stain #506	3 X 55 Gal	519.75
Penta Stain #506	9 X 5 Gal	162.00
Penta Stain #506	10 X 4 X 1 Gal	162.00
Penta Stain #507	20 X 5 Gal	360.00
Penta Stain #509	3 X 55 Gal	495.00
Santobrite # Fines	5 X 100 #	290.00
Super Diprite	20 X 50 #	350.00
Super Noxtane	68 X 50 #	1420.00
Woodtreat AA	4 X 40 #	102.40
Woodtreat AA	81 X 5 #	348.30
Woodtreat AA Guns	2 Each	71.76

### Penta Invoicing for Act. Month

Koppers	\$236,732
Customers	\$337,346

**\$574,078 (Up \$400,687 from same month 1973)**

### W T C Products Invoiced Act. Month

**\$286,640 (Up \$108,713 from same month 1973)**

TOLS004554

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date August 30, 1974

Page 10

### II. Raw Materials

More time than ever is being spent on purchasing due to shortages of a wide variety of chemicals. During the past month, one major Co-Solvent has had supply dry up and another is forth coming the end of the year. Alternates that we had are apparently decreasing in supply and we do not have candidate replacements to consider. Refineries which have had bottom streams for sale are beginning to find it economical and feasible to recycle out as much prime product as possible and use the rest for fuel.

A one cent per gallon fuel oil increase has been announced for September and it is expected availability may be a problem by month-end.

Chlorine for penta continues to be a major problem. To account for the 1.669 M pound production figure for August, we have delivered Phenol to Monsanto for 570,000 pounds penta and chlorine for 414,000 pounds.

On order for delivery in September, at this writing, we have only chlorine to produce 157,000 pounds penta, but 1,026,000 pounds in phenol.

### III. Inventory

Excess stock of color seal materials still exists.

What had begun to look like an excess stock of Liquid Noxtane in California, dissolved with several recent shipments.

### IV. Profit Opportunities

Complete cost revision of products was done as scheduled by 8/16. Some new changes will be done in two weeks. Sales prices are being revised accordingly.

TOLS004555

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 30, 1974

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### V. Assistance Requirements

1. Purchasing help on Chlorine as outlined in last months report.
2. Dow has not yet quite shipped half of the million pounds of penta contracted for the Calendar 1974. More shipments are needed.
3. Corporate purchasing should begin work on a 1975 contract as well.
4. Co-Solvent candidates needed for testing.

### VI. General Comments

#### September Sales Forecast

Penta	\$550,000
W T C	\$250,000
<hr/>	
	\$800,000

Inspection of prospective Lumbrella packaging equipment begun. Will have definite plans formulated in two weeks.

### VII. Travel Plans

No dates yet. Still expect to have some travel to inspect Lumbrella equipment.

Visit to Camden and Enfield Warehouses. Possible in September to inspect and relabel product for EPA establishment numbering and look for possible relocation of Camden warehouse.

RFS/sjk

R. F. Simmons

TOLS004556

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K-750

Location St. Louis, Missouri

Subject Monthly Report - July 1974  
Wood Treating Chemicals Operations

Date August 5, 1974

### I. Shipment Highlights - (July Accounting Month)

#### 1. Houston, Texas Warehouse

1 Sale Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>
WTC #74	2 X 460 #	920 #

#### 2. Camden, New Jersey Warehouse

13 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>
Penta Wood Pres. Conc.	6 X 6 X 1 G	36 G
Penta Wood Pres. Conc.	4 X 55 G	220 G
Penta Wood Pres. RTU	10 X 6 X 1 G	60 G
Penta Wood Pres. RTU	10 X 5 G	50 G
Penta Stain #509	3 X 55 G	165 G
Woodtox 140 RTU	10 X 55 G	550 G
Woodtox RTU	80 X 6 X 1 G	480 G
Woodtox RTU	10 X 5 G	50 G
Woodtox RTU	3 X 55 G	220 G

#### 3. Enfield, North Carolina Warehouse

19 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>
Liquid Noxtane SS 1	35 X 55 G	1925 G
Liquid Azide 200	2 X 55 G	110 G
End Spray 400 Green	2 X 55 G	110 G
Timbertreat 625	6 X 55 G	330 G
Lumbrella 15 Redwood	4 X 53 G	212 G
Lumbrella 12 Red Brown	5 X 53 G	265 G
Lumbrella 33 Redwood	27 X 3 G	81 G
Super Noxtane	11 X 50 #	550 #
Santobrite Pellets	23 X 100 #	2300 #

TOLS004557

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

Page 2

1. Newark, California Warehouse - By Customer

P. B. M. Supply Liquid Noxtane SS 1	Chico, California 44 X 55 Gal	
McCormick & Baxter Liquid Noxtane SS 1	Stockton, California 1 X 55 Gal	242.00

TOLS004558

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date August 5, 1974

Page 3

### 5. Richmond, California Blender

Selma Pressure Treating Woodtox 140 RTU	Selma, California 5600 Gal	2240.00
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### 6. Tuscaloosa, Alabama Blender - By Customer

Woodtox 140 RTU - Bulk

Cottondale Wood Products Tuscaloosa, Alabama	4908 Gal	3337.44
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International Wooden Container Ardmore, Tennessee	3762 Gal	2558.16
--	----------	---------

Norman Treating Company Goshen, Alabama	4957 Gal	3370.76
--	----------	---------

Holman Wood Products Northport, Alabama	1086 Gal	738.48
--	----------	--------

Tusco Wood Products Tuscaloosa, Alabama	8270 Gal	5623.60
--	----------	---------

### 7. Cotton Valley, Louisiana Blender - By Customer

Woodtox 140 RTU - Bulk

Ozark Box Company Clarksville, Arkansas	17936 Gal	12196.48
--	-----------	----------

Texas Container Texarkana, Texas	11942 Gal	8120.56
-------------------------------------	-----------	---------

Leggett Lumber Company Livingston, Texas	5946 Gal	4043.28
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TOLS004559

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

Page 4

### Cotton Valley, Louisiana Blender Continued

Great Southern Wirebound  
Magnolia, Mississippi      14968 Gal      10178.24

Clyde Dunagan Wood Products  
Cove, Arkansas      4054 Gal      2756.72

B & F Mfg. Company  
Ashdown, Arkansas      6066 Gal      4124.88

Commercial Box  
Texarkana, Texas      6088 Gal      4139.84

### 8. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant      23967 Gal      Timbertox 7 1/2%      15098.32

### 9. Portland, Oregon Blender - By Customer

Northwest Plywood  
Arlington, Washington      Woodtox 140 RTU  
6608 Gal      4625.60

Coin Millwork Co.  
Prineville, Oregon      Woodtox 140 RTU  
6666 Gal      4266.24

Kinnear Door Co.  
Centralia, Washington      Woodtox 140 RTU  
10 X 55 Gal      797.50

Jasco Chemical Co.  
Mt. View, California      Woodtox 140 Conc  
2982 Gal      4651.92

Jeld Wen Co.  
Flagstaff, Arizona      Woodtox 140 RTU  
7023 Gal      5267.25

TOLS004560

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

Page 5

### Portland, Oregon Blender Continued

Cascade Wood Products White City, Oregon	Woodtox 140 RTU 3353 Gal	2347.10
	Woodtox P.P. RTU 3969 Gal	3175.20
		5522.30
Cascade Industrial Supply Redding, California	Woodtox 140 RTU 100 X 55 Gal	6077.50
Great Western Chemical Seattle, Washington	Woodtox 140 RTU 7915 Gal	5638.00

### 10. St. Louis, Missouri

Penta	(Calendar July Month)	LBS
F P D Plants	448,823	
Customers	397,987	
W T C	112,350	
Total	959,160	

### W T C Products      Major Shipments - By Customer

Adkins Const. Co. Woodtox 140 RTU	Louisville, Kentucky 3959 Gal	2692.12
Bennett Box Co. Woodtox 140 RTU	Centerville, Iowa 9817 Gal	6675.56
Brainerd Wood Craft Woodtox 140 RTU	Brainerd, Minnesota 5735 Gal	3899.80

TOLS004561

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

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### St. Louis, Missouri Major Shipments Continued

Milan Box Corp. Woodtox 140 RTU	Milan, Tennessee 5894 Gal	4007.92
Universal Co-op Inc. Penta Wood Pres. Conc.	Alliance, Ohio 3986 Gal	8569.90
Knapheide Mfg. Co. Woodtox 152 RTU	West Quincy, Illinois 5861 Gal	7036.80
R. J. Bond Lumber Penta Wood Pres. RTU	Carmi, Illinois 5564 Gal	2782.00
Mosley Cabinet Co. Woodtox 140 RTU	Pine Bluff, Arkansas 45 X 55 Gal	3093.75
Gibson Homans Co. Penta Wood Pres. Conc.	Des Moines, Iowa 8 X 55 Gal	1540.00
State of New York Penta Wood Pres. Conc.	Rockbridge, New York 10 X 55 Gal	1815.00
Federal Chemical Co. Penta Stain Conc.	Indianapolis, Indiana 20 X 55 Gal	3850.00
Penn Central Transportation Timbertox D-5 RTU	Columbus, Ohio 160 X 55 Gal	9064.00
Elco Mfg. Co. Woodtox P. P. Conc. Penta Wood Pres. Conc. Penta Wood Pres. Conc.	Pittsburgh, Pennsylvania 20 X 55 Gal 1 X 55 Gal 10 X 5 Gal	2827.00 173.25 75.00
		3075.25

TOLS004562

BZTO104(e)041383

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

Page 7

### St. Louis Major Shipments Continued

Indiana Harbor R. R. Penta Wood Pres. RTU	Gibson, Indiana 37 X 55 Gal	2035.00
Chemical Specialties Liquid Noxtane SS 1	Valdosta, Georgia 23 X 55 Gal	4269.38
End Spray 400	5 X 55 Gal	1559.25
Lumbrella 33 Yellow	432 X 3 Gal	7056.72
		<u>12885.35</u>
J. H. Baxter Co. L. S. T. Co-Solvent	Eugene, Oregon 31590 #	4517.37
Weyerhaeuser Co. SPS 30% Solution	Craig, Oklahoma 10692 Gal	11226.60
Vulcan Asphalt WK-55 Penta Co-Solvent	Cordova, Alabama 5465 Gal	1803.45
Crown Chemicals Penta Wood Pres. Conc. Penta Wood Pres. Conc. Timbertox 625 Woodtox RTU Penta Stain #502 Penta Stain #502 Penta Stain #506	St. Louis, Missouri 4 X 55 Gal 45 X 5 Gal 25 X 5 Gal 25 X 5 Gal 25 X 5 Gal 30 X 4 X 1 Gal 20 X 4 X 1 Gal	732.60 850.50 472.50 293.75 450.00 486.00 324.00
		<u>3609.35</u>

TOLS004563

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

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### St. Louis, Missouri Major Shipments Continued

Canton Chemical	Canton, North Carolina	
Penta Wood Pres. Conc.	12 X 55 Gal	1752.30
Penta Stain #502	1 X 55 Gal	156.75
Penta Stain #505	1 X 55 Gal	156.75
Penta Stain #506	1 X 55 Gal	156.75
Penta Stain # 507	1 X 55 Gal	156.75
Penta Stain #508	1 X 55 Gal	156.75
		2536.05

### Balance of Shipments By Product Totals

Woodtox 140 Conc.	6 X 55 Gal	924.00
Woodtox 152 RTU	7 X 55 Gal	831.50
Woodtox PrePrime RTU	27 X 55 Gal	2230.25
Woodtox RTU	3 X 55 Gal	319.00
Woodtox RTU	40 1/2 X 6 X 1 Gal	664.95
Wood Pres Milw 18142 B	20 X 55 Gal	990.00
WR 340 Conc.	10 X 408 Lb	730.32
Penta Wood Pres. Conc.	14 X 55 Gal	2405.70
Penta Wood Pres. Conc.	19 X 5 Gal	365.30
Penta Wood Pres. Conc.	64 X 6 X 1 Gal	1497.00
Penta Wood Pres. RTU	62 X 5 Gal	572.00
Penta Wood Pres. RTU	81 X 6 X 1 Gal	1158.00
Lumbrella 12 R/Br	1 X 53 Gal	188.15
Lumbrella 33 Yellow	54 X 3 Gal	1036.80
Timbertreat 95	1 X 55 Gal	236.50
Timbertreat 625	5 X 55 Gal	1053.66
Timbertreat 625	11 X 5 Gal	203.50
Coppertreat 110 RTU	3 X 55 Gal	186.45
Liquid Noxtane SS 1	4 X 55 Gal	923.31
B Wood Pres.	1 X 55 Gal	63.25
B Wood Pres.	14 X 5 Gal	108.50

TOLS004564

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

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### Balance of Shipments By Product Totals Continued

B Wood Pres.	102 X 6 X 1 Gal	1418.80
KLB Beam Sealer	13 X 55 Gal	1152.25
Wood Seal Wax	1 X 426 Gal	166.14
Clear End Sealer	10 X 55 Gal	1485.00
Pole Life T.F.	1 X 50 LB	25.50
Woodtreat AA	20 X 40 LB	456.00
Santobrite Pellets	4 X 50 LB	100.00
Super Diprite	26 X 50 LB	521.50
Super Noxtane	10 X 50 LB	210.00
W T C # 71	3 X 515 LB	1019.70
W T C # 7-11	6 X 39 LB	135.72
Penta Stain #501	4 X 4 X 1 Gal	64.80
Penta Stain #502	16 X 5 Gal	324.00
Penta Stain #502	24 X 4 X 1 Gal	360.28
Penta Stain #503	4 X 4 X 1 Gal	64.80
Penta Stain #503	4 X 1 Qts.	7.60
Penta Stain #504	1 X 4 X 1 Gal	16.20
Penta Stain #504	1 X 12 X 1 Qts	19.20
Penta Stain #505	1 X 55 Gal	173.25
Penta Stain #505	2 X 5 Gal	32.50
Penta Stain #505	1 X 4 X 1 Gal	14.80
Penta Stain #506	5 X 5 Gal	18.00
Penta Stain #506	24 X 4 X 1 Gal	388.80
Penta Stain #506	1 X 12 X 1 Qts	22.80
Penta Stain #507	4 X 4 X 1 Gal	64.80
Penta Stain #507	1 3/4 X 12 X 1 Qts	38.00
Penta Stain #508	3 X 4 X 1 Gal	44.40
Penta Stain #508	1 X 12 X 1 Qts	19.20

TOLS004565

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

Page 10

### Penta Invoicing For Month

Koppers	\$ 153,739.94
Customers	\$ 133,085.54

**286,825.48 (Up \$108,000 from Same Month 1973)**

### W T C Products Invoiced for Month

**\$ 304,731.60 (Up \$156,000 from Same Month 1973)**

## II. Raw Materials

Some raw material costs have been or are becoming static, notable exceptions are seen in specialty items, containers, pigments and refinery products. Recent increases include:

Lanvar	to .375 Lb.	Eff 8/5	Up .06 Lb.
Drums		Eff 7/17	Up .60 Ea Aug.
Yellow X-3492 Pigment	to 1.25 Lb.	Eff 8/1	Up .10 Lb.
#2 Fuel Oil	to .3113 Gal	Eff 8/1	Up .014 Gal.
Thalo Green Aquasperse	to 2.86 Lb. Pigment	Eff 7/25	Up .67 Lb.

Raw material for Penta continues in short supply. Good quality Phenol is short whereas material or poor quality not fit for penta manufacture is being touted daily by chemical dealers (at high prices). Chlorine remains short and this will not be better for over a year according to most of the chemical analysts.

Corporate purchasing should make extreme efforts to procure a steady long-term flow of Chlorine to supply Monsanto - preferably at a maximum cost of \$200.00 ton delivered, and at a rate of at least 250,000 pounds per month.

TOLS004566

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 5, 1974

Page 11

### III. Inventory

No excess stocks exist except the color seal materials not being utilized.

### IV. Profit Opportunities

Overhead figures for August will again be raised to alleviate unabsorbed costs, necessitating a Sales review of our product prices. New Costs will be out by August 16 to include our new labor rates.

### V. Assistance Requirements

1. Penta Raw Materials as outlined in III.
2. Corporate purchasing work on Dow for more Penta.

### VII. General Comments

#### Sales Forecast for August

Penta	\$500,000
WTC Products	300,000

### VIII. Travel Plans

Possible travel to inspect used equipment for Lumbrella packaging. No definite plans now.

R. F. Simmons

RFS/sjk

TOLS004567

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery  
 T. Onett  
 D. F. Taylorson

To R. B. Putman  
 Location Pittsburgh, PA K-750  
 Subject Monthly Report - June 1974  
Wood Treating Chemicals Operations

From R. F. Simmons  
 Location St. Louis, Missouri  
 Date July 3, 1974

### I. Shipment Highlights - (June Accounting Month)

#### 1. Houston, Texas Warehouse 4 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
WTC #71	8 X 515#	4120#	2739.80
WTC #73	2 X 481#	962#	481.00

#### 2. Camden, New Jersey Warehouse 15 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtox Pre Prime Conc.	1 X 55 G	55 G	147.50
Woodtox RTU	3 X 55 G	165 G	181.50
Woodtox RTU	55 X 6 X 1 G	330 G	696.00
Penta Wood Pres. Conc.	8 X 55 G	440 G	1426.43
Penta Wood Pres. RTU	2 X 55 G	110 G	129.25
Penta Wood Pres. RTU	21 X 5 G	105 G	147.25
Penta Wood Pres. RTU	15 X 6 X 1 G	90 G	184.50

#### 3. Enfield, North Carolina Warehouse 11 Sales for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Santobrite Pellets	16 X 100 #	1600 #	816.00
Super Noxtane	210 X 50 #	10500 #	3800.00
Lumbrella 15 Yellow	16 X 53 G	848 G	2840.80
Lumbrella 15 Red Wood	9 X 53 G	477 G	1860.30
Lumbrella 12 Red Brown	6 X 53 G	318 G	1033.50
Liquid Noxtane SS 1	2 X 55 G	110 G	467.50
Timbertreat 625	6 X 55 G	330 G	1221.00

TOLS004568

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. Simmons

Location \_\_\_\_\_

Date July 3, 1974

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### 4. Newark, California Warehouse - By Customer

Louisiana Pacific Corp.	Seattle, Washington	
Liquid Noxtane SS 1	3 X 55 Gal.	709.50
Cascade Industrial Supply	Redding, California	
Liquid Azide	6 X 55 Gal	1612.88
Liquid Noxtane SS 1	20 X 55 Gal	3646.50
Liquid Noxtane SS 1	3 X 345Gal	3431.03
Red End Sealer	1 X 55 Gal	119.21
		\$ 3809.62

### 5. Richmond, California Blender - By Customer

Woodtox 140 RTU - Bulk		
D & M Wood Products	41000 G	18450.00
Richmond, California		
Dant & Russell, Inc.	15138 G	6812.10
North Plains, Oregon		
Selma Pressure Treating	6977 G	2790.80
Selma, California		
Willamette Valley Company	3000 G	1200.00
Medford, Oregon		
Cascade Wood Products	4000 G	1600.00
White City, Oregon		
Jeld Wen Company	7018 G	2807.20
Flagstaff, Arizona		
San Diego Wood	6315 G	2841.75
National City, California		

TOLS004569

# KOPPERS

## Interoffice Correspondence

To R. B. Petman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date July 3, 1974

Page 3

6. Tuscaloosa, Alabama Blender - By Customer

Woodtex 140 RTU - Bulk

Tusco Wood Products Tuscaloosa, Alabama	7909 G	4982.67
International Wooden Container Ardore, Tennessee	3967 G	2697.56
Cettondale Wood Products Tuscaloosa, Alabama	3697 G	2329.11
Holman Wood Products Northport, Alabama	1578 G	994.14

7. Cotton Valley, Louisiana Blender - By Customer

Woodtex 140 RTU - Bulk

Lear Siegler Corp. Arcadia, Louisiana	8157 G	5138.91
S & W Industries Ft. Smith, Arkansas	6111 G	3849.93
Great Southern Wirebound Magnolia, Mississippi	7470 G	4706.10
Texas Container Texarkana, Texas	6137 G	3866.31
Commercial Box Texarkana, Texas	5947 G	3746.61

TOLS004570

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date July 3, 1974

Page 4

### Cotton Valley, Louisiana Blender Continued

Bennett Box Company Texarkana, Texas	5952 G	3749.76
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Ozark Box and Crating Clarksville, Arkansas	5958 G	3574.80
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Bibler Bros. Co., Inc Clarksville, Arkansas	6105 G	3846.15
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### 8. Minneapolis, Minnesota Blender - Total

Koppers Superior Plant	29926 Gal Timbertex 7 1/2%	\$17955.60
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### 9. Portland, Oregon Blender - By Customer

J. H. Baxter Eugene, Oregon	Petrosset II 18 X 460 #	2530.00
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Anstrik S/B Green 2 X 55 G	328.90
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Portland Gen Elec. Co. Portland, Oregon	Timbertex 40 Conc 6 X 5 G	93.00
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### 10. St. Louis, Missouri

Penta (calendar June month)	<u>LBS</u>
FPD Plants	462,643
Customers	359,203
WTC	<u>99,345</u>
Total	921,191

TOLS004571

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date July 3, 1974

Page 5

<u>W T C Products</u>	<u>Major Shipments</u>	<u>By Customer</u>
Koppers Co., Inc WK-55 Penta Co-Solvent	Salisbury, Maryland 115 X 55 G	5060.00
Chemical Specialties Liquid Nortane SS 1 Timbertreat 625 Penta Wood Pres. Conc Lumbrella 33 Yellow Santobrite Pellets Super Nortane	Valdosta, GA 30 X 55 G 4 X 55 G 10 X 5 G 405 X 3 G 20 X 100 # 120 X 50 #	5568.75 693.00 58.50 6615.68 820.00 1836.00  15591.93
Wood Protection Co. Penta Wood Pres. Conc	Nacogdoches, Texas 3859 G Bulk	7602.23
New England Log Homes Woodtex 140 RTU	Great Barrington, Mass 58 X 55 G	3828.00
Bennett Box Co. Woodtex 140 RTU	Centerville, Iowa 9855 G Bulk	6208.65
Bennett Box Co. Woodtex 140 RTU	Clinton, Iowa 5009 G Bulk	3155.67
New Idea Farm Equip. Woodtex 140 RTU	Coldwater, Ohio 4026 G. Bulk	2737.68
Kansas Box and Lumber Woodtex 140 RTU	Independence, Kansas 5956 G Bulk	3752.28

TOLS004572

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1974

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### St. Louis, Missouri Major Shipments Continued

Vetter Mfg. Co. Woodtex Pre-Prime RTU	Stevens Point, Wisconsin 2468 G. Bulk	1653.56
Jordan Company Timbertex D-5	Memphis, Tennessee 3996 G. Bulk	2077.92
Vulcan Asphalt WK-55 Penta Co-Solvent	Cordova, Alabama 5484 G. Bulk	1809.72
Federal Chemical Woodtex Pre-Prime Conc.	Indianapolis, Indiana 20 X 55 Gal	2475.00
Gary Sturdevant Penta Wood Pres. Conc	Niangua, Missouri 10 X 55 Gal	1622.50
Great Southern Wirebound Coppertreat 80 Conc. WR-80 Conc	Magnolia, Mississippi 8 X 55 Gal 4 X 390 #	1918.40 514.80 <hr/> 2433.20
Temple Industries WR-340 Conc	Diboll, Texas 48 X 408 #	3309.70
ETC Chemical Co. Lumabrella 33 Yellow	Hattiesburg, Mississippi 135 X 3 Gal	2450.23
Louisiana-Pacific Corp. Lumabrella Green	Winnfield, Louisiana 56 X 53 Gal	9200.80
Taylor Lumber Co. Super Diprite	McDermott, Ohio 120 X 50 #	2220.00

TOLS004573

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1974

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### St. Louis, Missouri Major Shipments Continued

Kentucky Mine Supply	Harlan, Kentucky	
Super Nextane	120 X 50 #	1944.00

### Balance of Shipments By Product Totals

Woodtex 140 RTU	4 X 55 G	330.00
Woodtex RTU	1 X 55 G	99.00
Woodtex RTU	39 X 5 G	419.25
Woodtex RTU	20 X 6 X 1 G	312.00
Woodtex PrePrime Conc.	4 X 55 G	591.80
Woodtex S Conc.	1 X 55 G	159.50
Woodtex 152 RTU	7 X 55 G	1158.00
Penta Wood Pres. Conc.	10 X 55 G	1732.50
Penta Wood Pres. Conc.	80 X 5 G	1317.50
Penta Wood Pres. Conc.	55 X 6 X 1 G	1302.00
Penta Wood Pres. RTU	8 X 55 G	594.00
Penta Wood Pres. RTU	50 X 5 G	425.00
Penta Wood Pres. RTU	10 X 6 X 1 G	123.00
Penta Stain #502	5 X 55 G	783.75
Penta Stain #502	34 X 5 G	552.50
Penta Stain #502	19 X 4 X 1 G	281.10
Penta Stain #503	20 X 5 G	325.00
Penta Stain #509	6 X 55 G	940.50
Coppertreat 80 Conc.	1 X 55 G	226.60
Coppertreat 120 RTU	2 X 55 G	183.92
Coppertreat 120 RTU	20 X 5 G	221.00
Petrosol II	4 X 460 #	1012.00
LST Co-Solvent II	16 X 435 #	1357.20
KB-21 Solvent	1 X 55 G	82.50
Liquid Nextane SS 1	1 X 55 G	233.75
Timbertreat 625	4 X 55 G	814.00
Timbertreat 625	1 X 30 G	111.00
Timbertreat 625	30 X 5 G	555.00

TOLS004574

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1974

**Page 8**

### Balance of Shipments Continued

B Wood Pres.	37 X 6 X 1 G	470.64
K L B Beam Sealer	12 X 55 G	1056.00
Clear End Sealer	2 X 55 G	297.00
Clear End Sealer	2 X 5 G	31.50
Anetrik Sagebrush Green	14 X 5 G	245.00
W T C 7-11	1 X 430 #	249.40
Santobrite Pellets	52 X 100 #	2412.00
Super Naxtane	40 X 50 #	720.00
Super Diprite	215 X 50 #	3811.00
Pole Life TF	45 X 50 #	1025.00
C Wood Pres.	13 X 50 #	309.32
Woodtreat AA Tubes	279 X 5 #	1116.00
Penta Tration Dye	1 X 60 #	214.89
Poly Kraft Paper Brown	1 Roll	8.25
Woodtreat AA Tags and Nails	1 Lot	7.89

### **Penta Invoicing for Month**

Koppers	\$90,279
Customers	<u>\$182,485</u>
	<b>\$ 272,764</b>

(Down \$43,864 from same month 1973)

### **W T C Products Invoiced for Month**

<b>\$235,199</b>	(Down \$12,896 from same month 1973)
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TOLS004575

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1974

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### II. Raw Materials

Costs continue upward; following increases -

Mineral Spirits (St. Louis)	to .3661 Gal	Eff 6/1	(Up .061)
Mineral Spirits (Tuscaloosa)	to .3225 Gal	Eff 6/7	(Up .0075)
WPO (Minneapolis)	to .3256 Gal	Eff 7/1	(Up .001)
Chevron 400 (St. Louis)	to .32 Gal	Eff 6/1	(Up .02)
Penta	to .3603 LB	Eff 7/1	(Up .0935)
Isopropyl Alcohol	to 1.36 Gal +Frt.	Eff 7/1	(Up .45 approx)
Filtrex 70	to .3025 LB	Eff 7/1	(Up .03)
Lanvar	to .315 LB	Eff 7/1	(Up .02)
Red Oxide Pigment Aquasperse	to .47 LB	Eff 6/3	(Up .04)
Perm Carmine Pigment Aquasperse	to 1.86 LB	Eff 6/3	(Up .23)
Naphthol Red Pigment Aquasperse	to .99 LB	Eff 6/3	(Up .12)
Dinitro Orange Pigment Aquasperse	to 2.44 LB	Eff 6/1	(Up 1.03)
Thalo Green Pigment Aquasperse	to 2.19 LB	Eff 6/1	(Up .31)
Thalo Blue Pigment Aquasperse	to 1.37 LB	Eff 6/1	(Up .05)
Titanium White Pigment Aquasperse	to .50 LB	Eff 6/1	(Up .03)
Yellow Oxide Pigment Aquasperse	to .45 LB	Eff 6/1	(Up .06)
Chrome Oxide Pigment Aquasperse	to .77 LB	Eff 6/1	(Up .07)
Green Pigment Oil Dispersed	to 1.17 LB	Eff 5/15	(Up .21)
Blue Pigment Oil Dispersed	to 1.28 LB	Eff 5/15	(Up .13)
#2 Fuel Oil	to .2973 Gal	Eff 7/1	(Up .032)
Santobrite	to .4265 LB	Eff 7/1	(Up .054).105
SPS-30 Solution	<i>.805</i> to <del>xxxxx</del> Gal +Frt	Eff 7/1	(Up .406 approx)
5 Gal. O.H. Pails Lined	to 1.76 EA	Eff 7/1	(Up .12)

Availability of certain items remains tight. Penta will be perhaps cut in half for July due to lack of Chlorine. As a consequence, we have discussed with Jim Batchelder the expected supply and expect steps to be taken to remove several FPD Plants from Penta treatment. Customer supply will be curtailed just as severely, and we expect to simply not be able to supply what is needed to keep many operating.

TOLS004576

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1974

Page 10

### III. Inventory

**Richmond** - Stock all sold. This location should now be removed from Pittsburgh records.

**Copper Naphthenates** - continuing to move out in small orders.

**Color Seal** - Same materials on hand. No. status change.

### IV. Profit Opportunities

With the Penta problems that we face in July, sales and profits will be hard hit.

### V. Assistance Requirements

With the preceding comments, our number one need has to be help in securing Penta - either by supplying Chlorine to Monsanto for production or buying import Penta which needs to be quality material and have superior handling properties, as well.

While Dow is committing to order placement, when it comes to making shipments there seems to be little improvement in their penta situation.

TOLS004577

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date July 3, 1974

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### VI. General Comments

Sales for the first week of the accounting month of July are \$119,000 penta and \$88,000 WTC products. There are a very few penta orders yet unbilled and with penta production for the balance of the period probably at no more than 300,000 lbs., we will forecast penta at \$300,000 for the month and WTC products at \$350,000.

### VII. Travel Plans

**July 8 - 12 Vacation**

**R. F. Simmons**

**RFS/sjk**

**TOLS004578**

**June 11, 1974**

**Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117, St. John's Sta.  
Portland, Oregon 79203**

**Dear Neil:**

**Koppers' Forest Products Division is taking a complete physical inventory as of closing the evening of June 20, 1974. Accordingly, please take the inventory and mail so as to arrive in St. Louis by Monday, June 24.**

**It will be necessary also to complete the enclosed affidavit.**

**Best Regards,**

**R. F. Simmons  
Operations Manager**

**RFS/sjk**

**Enclosure**

**TOLS004579**

**BZTO104(e)041400**

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
T. Onett  
D. F. Taylorson

**KOPPERS**

## **Interoffice Correspondence**

To R. B. Putman  
Location Pittsburgh, PA K-750  
Subject Monthly Report - March 1974  
Wood Treating Chemicals Operations

From R. Simmons  
Location St. Louis, Missouri  
Date April 8, 1974

## I. Shipment Highlights - (March Accounting Month)

1. Houston, Texas Warehouse  
W T C #71 2 X 515# Drum \$515.00
  2. Camden, New Jersey Warehouse  
12 Sales Total for Month

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtox RTU	55 Gal.	110	121.00
Woodtox RTU	5 Gal.	15	22.50
Woodtox RTU	6 X 1 Gal.	132	282.48
Woodtox RTU	12 X 1 Qts.	24	21.60
Woodtox S	55 Gal.	550	1168.20
Woodtox 140 RTU	55 Gal.	275	310.75
Woodtox 140 Conc.	55 Gal.	330	742.50
Woodtox Preprime Conc.	55 Gal.	110	271.70
Penta Wood Pres. Conc.	55 Gal.	1100	2585.00

- 3. Enfield, North Carolina Warehouse  
18 Sales Total for Month**

<u>Product</u>	<u>Container</u>	<u>Units</u>	\$
Red End Sealer	5 Gal.	25	64.25
Green End Spray 400	5 Gal.	15	92.40
Green End Spray 400	55 Gal.	55	352.00
Timbertreat 95	30 Gal.	90	397.80
Timbertreat 625	55 Gal.	110	352.00
Super Noxtane	5 X 10# Bag	8700#	2792.10
Liquid Axide 200	55 Gal.	55	631.40
Liquid Noxtane SS 1	55 Gal.	2035	8007.45
Lumbrella 15 Redwood	53 Gal.	212	667.80
Lumbrella 33 Yellow	3 Gal.	81	595.35
Lumbrella 33 Redwood	3 Gal.	243	1858.95

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 8, 1974

Page 2

4. Newark, California Warehouse

Great Western Chemical Company, - Seattle, Washington  
Red End Sealer 7 X 55 Gal. Drums \$592.32

Munnell & Sherrill - Coos Bay, Oregon  
Liquid Noxtane SS 1 24 X 55 Gal. Drums \$4016.76

Munnell & Sherrill - Arcata, California  
Liquid Noxtane SS 1 2 X 345 Gal. Totes 2099.67  
Liquid Noxtane SS 1 25 X 55 Gal. Drums 4184.13  
Orange End Sealer 4 X 55 Gal. Drums 312.29  
Clear End Sealer 15 X 55 Gal. Drums 1062.79  
Blue End Sealer 1 X 55 Gal. Drums 78.97  
Liquid Azide 200 4 X 55 Gal. Drums 860.20

\$ 8537.15

Munnell & Sherrill - Roseburg, California  
Liquid Noxtane SS 1 34 X 55 Gal. Drums 5690.41  
Liquid Azide 200 6 X 55 Gal. Drums 1290.30

\$ 6980.71

Munnell & Sherrill - Eugene, Oregon  
Liquid Noxtane SS 1 136 X 55 Gal. Drums \$22761.64

5. Richmond, California Blender Totals by Customer Woodtex 140 RTU  
B & F Box and Lumber Co.  
Los Alamitos, California 2000 Gals. 800.00

International Paper Co.  
Weed, California 6006 Gals. 2402.40

Jeld Wen Co.  
Flagstaff, Arizona 6885 Gals. 2754.00

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 8, 1974

Page 3

6.	Tuscaloosa, Alabama Blender - Totals by Customer			
	Holman Wood Products	1643 Gal. Woodtox 140		642.70
	Norman Treating Co.	4717 Gal. Woodtox 140		1886.80
	Great Southern Wirebound Box	6921 Gal. Woodtox 140		2768.40
	J. C. Jourdan	7904 Gal. Woodtox 140		3952.00
	Tusco Wood Products	10297 Gal. Woodtox 140		4772.87
7.	Cotton Valley, Louisiana - Blender - Totals by Customer			
	Frank Mfg. Co.	1995 Gal. Woodtox 140		778.05
	Ozark Box & Crating Co.	6185 Gal. Woodtox 140		2412.15
	Texas Container & Box Co.	6171 Gal. Woodtox 140		2406.69
	S & W Industries	6160 Gal. Woodtox 140		2402.40
	Bennett Box Co.	6030 Gal. Woodtox 140		2351.70
	Lear Siegler Corp.	8040 Gal. Woodtox 140		3135.60
	Mulberry Lumber Co.	6900 Gal. Woodtox 140		2691.00
	Great Southern Wirebound Box	7185 Gal. Woodtox 140		2802.15
8.	Minneapolis, Minnesota - Blender - Total			
	No Shipments			
9.	Portland, Oregon - Blender - Total by Customer			
		Clear Umbrella		
	Koppers - Oroville, California		1 X 55 Gal. Drum	\$167.75
	Cascade Wood Products Co.			
	White City, Oregon			
	Woodtox 140 RTU	5060 Gal.		2024.00
	Woodtox PrePrime RTU	6365 Gal.		3801.99
	Willamette Valley Company			
	Medford, Oregon			
	Woodtox 140 RTU	2437 Gal.		974.80

TOLS004582

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 8, 1974

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### 10. St. Louis, Missouri

#### W T C - Products - Major Shipments/Customers

Northern Sash	Woodtex P. P. RTU	8167 Gal.	4001.83
Knapheide Mfg. Co.	Woodtex 152 RTU	5931 Gal.	5159.97
Bennett Box Co.	Woodtex 140 RTU	16105 Gal.	6119.90
Milan Box Co.	Woodtex 140 RTU	6009 Gal.	2283.42
Ozark Box Co.	Woodtex 140 RTU	6014 Gal.	2296.72
General Box Co.	Woodtex 140 RTU	1461 Gal.	745.11
Wood Protection Co.	Penta Wood Pres. Conc.	3978 Gal.	6046.56
Universal Coop.	Penta Wood Pres. Conc.	3986 Gal.	6457.32
R. J. Bond Lumber Co.	Penta Wood Pres. R. T. U.	5815 Gal.	2500.45
Jennison Wright	Penta Wood Pres. R. T. U.	16566 Gal.	5963.76

#### Chemical Specialties

Lumbrella 33 Yellow	3 Gal.	43 Pallets	16699.93
Lumbrella 15 Red/Brown	20 X 55 Gal.	Drums	2051.10
Lumbrella 9 Red/Brown	6 X 55 Gal.	Drums	486.54
Lumbrella 15 Yellow	15 X 55 Gal.	Drums	2513.79
Liquid Nortane SS 1	70 X 55 Gal.	Drums	11365.20
Green End Spray 400	20 X 55 Gal.	Drums	5009.40
Super Nortane	160 X 50# Bags		2325.60
Santebrite Pellets	15 X 100# Drums		405.00
Penta Stain #503	5 X 5 Gal.	Drums	63.00
Penta Stain #506	5 X 5 Gal.	Drums	63.00

#### Standard Tar Products

Penta Stain #506	8 X 55 Gal.	Drums	1161.60
Penta Stain #506	30 X 5 Gal.	Drums	420.00

TOLS004583

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. Simmons  
Location \_\_\_\_\_  
Date April 8, 1974

Page 5

### Kentucky Mine Supply

Super Nextane	320 X 50 # Bags	4248.00
Super Diprite	80 X 50 # Bags	1026.00
Santobrite Pellets	40 X 100 # Drums	1080.00
Timbertreat 95	2 X 55 Gal. Drums	336.60
Timbertreat 625	30 X 5 Gal. Drums	465.75
Timbertreat 625	15 X 55 Gal. Drums	2376.00

### Columbia Supply

Santobrite Pellets	100 X 100 # Drums	3555.00
Timbertreat 625	2 X 55 Gal. Drums	316.80

### Crown Chemicals

Penta Stain #502	10 X 5 Gal. Drums	140.00
Penta Stain #506	10 X 5 Gal. Drums	140.00
Penta Stain #502	10 cs. 4 X 1 Gal.	132.00
Penta Stain #506	10 cs. 4 X 1 Gal.	132.00
Penta Wood Pres. Conc.	40 X 5 Gal. Drums	495.00
Penta Wood Pres. Conc.	6 X 1 Gal. 10 cs.	166.32
Penta Wood Pres. R.T.U.	2 X 55 Gal. Drums	133.10
Penta Wood Pres. R.T.U.	6 X 1 Gal. 10 cs.	95.40
Woodtox R.T.U.	6 X 1 Gal. 10 cs.	128.40

### Western Electric Co.

C Wood Pres.	2000 #	825.20
B Wood Pres.	2 X 55 Gal. Drums	92.40
B Wood Pres.	4 X 5 Gal. Drums	25.00

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmens

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 8, 1974

Page 6

### Balance of Shipments by Product Totals

Penta Wood Pres. Conc.	27 X 55 Gal. Drums	3470.12
Penta Wood Pres. Conc.	55 X 5 Gal. Drums	686.65
Penta Wood Pres. Conc.	6 X 1 Gal. 12 cs.	193.20
Penta Wood Pres. RTU	12 X 55 Gal. Drums	798.60
Penta Wood Pres. RTU Dark	88 X 55 Gal. Drums	3968.80
Penta Wood Pres. RTU	75 X 5 Gal. Drums	513.75
Penta Wood Pres. RTU	6 X 1 Gal. 43 cs.	387.00
Woodtex P.P. RTU	22 X 55 Gal. Drums	1635.53
Woodtex P.P. Conc.	5 X 55 Gal. Drums	679.25
Woodtex 140 Conc.	1 X 55 Gal. Drums	121.28
Woodtex 140 RTU	10 X 55 Gal. Drums	555.50
Woodtex RTU	12 X 5 Gal. Drums	112.20
Timbertreat 625	1 X 55 Gal. Drums	176.00
Woodtex RTU	6 X 1 Gal. 12 cs.	106.80
Woodtex RTU	12 X 1 Quarts 2 cs.	21.60
WR 340 Conc.	20 X 408 # Drums	1383.12
Liquid Noxtane SS 1	1 X 55 Gal. Drums	201.47
Lumbrella Red/Brown	2 X 55 Gal. Drums	286.20
Lumbrella 33 Yellow	108 X 3 Gal.	1716.80
Clear End Sealer	4 X 55 Gal. Drums	367.40
K L B Beam Sealer	11 X 55 Gal. Drums	792.55
Wood Seal Wax	1 X 426 # Drum	132.06
Woodtreat AA	9 X 40 # Drum	126.00
Super Noxtane	40 X 50 # Bags	692.00
Super Diprite	20 X 50 # Bags	346.00
Penta Stain #502	1 X 55 Gal. Drum	145.20
Penta Stain #502	3 X 5 Gal.	42.00
Penta Stain #502	4 X 1 Gal. 4 cs.	52.80
Penta Stain #504	4 X 1 Gal. 2 cs.	26.40
Penta Stain #505	4 X 1 Gal. 2 cs.	26.40
Penta Stain #506	1 X 55 Gal. Drum	145.20
Penta Stain #506	4 X 1 Gal. 8 cs.	105.60
Penta Stain #506	12 X 1 Quarts 12 cs.	181.44
Penta Stain #509	3 X 55 Gal. Drum	435.60

TOLS004585

# KOPPERS

## Interoffice Correspondence

To R. B. Patman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. Simmons  
Location \_\_\_\_\_  
Date April 8, 1974

Page 7

### Penta Invoicing for Month

Koppers	\$167, 371
Customers	\$256, 126
	<hr/>
	\$423, 497      (Up \$249, 000 from same period last year)

### W T C Products Invoicing for Month

	\$234, 712      (Up \$43, 300 from same period last year)
--	--

### Penta Shipments (Calendar March)

FFD Plants	559973#
Customers	669693#
W T C	114848#
	<hr/>
	1, 344, 514#

## II. Raw Materials

The following increases have been incurred since our February report:

Northwestern Refinery WPO at St. Louis Park	.0625/Gal.
Mineral Spirits at Cotton Valley	.04/Gal.
Mineral Spirits at Tuscaloosa	.0467/Gal.
Tall Oil Fatty Acid	.15/Lb.
Wax	.0126/Lb.
Penta	.03/Lb.
Pigments Water Dispersed	
Red Oxide	.07/Lb.
Permanent Carmine	.15/Lb.
Toluidine Red	.09/Lb.

TOLS004586

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. Simmons  
Location \_\_\_\_\_  
Date April 8, 1974

Page 8

Dinitroline Orange	.34/Lb.
Lamp Black	.05/Lb.
Burnt Umber	.07/Lb.
Ethylene Glycol	.05/Lb.
Isopropanol	.13/Gal.
Acetone	.0525/Lb.
Chevron 400 Solvent	.035/Gal.
Kolineum	.07/Gal.
Diethyel Ethanolamine	.06/Lb.
Citric Acid	.015/Lb.

By accepting many alternates as in pigments and Tall Oil Fatty Acid, some shortages have been minimized. There seems to be some easing on Ethylene Glycol and Isopropanol, but Acetone during this month has been quite short. Allocations on Mineral Spirits will not affect April sales.

The Penta production will be at only approximately 800,000 Lbs. for April due to Phenol shortage; Dow has not been able to increase shipments any - except only 40,000 Lbs. in April. We still are being adversely affected by not being able to increase our supply of oil at Minneapolis and fuel oil at St. Louis; this was discussed with J. Kennedy and J. Hasnauer in Purchasing on April 2.

Pittsburgh purchasing did secure 40 drums of Ethylene Glycol recently.

### III. Inventory

Little results have been achieved in moving the Woodtex 140 RTU stock from Richmond. The color seal materials remain on hand. No other products or materials are in excess.

TOLS004587

# KOPPERS

## Interoffice Correspondence

To R. B. Patman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 8, 1974

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### IV. Profit Opportunities

Updating of costs and reporting is occurring with every material as the increase becomes justified.

Having just had a favorable response from our major solvent supplier for the majority of needs for Liquid Nextane on the West Coast, we now can move on the major mills there which are not using our products.

The greatest opportunity still lies with Penta if we can supply Phenol to Monsanto while the national shortage exists.

### V. Assistance Requirements

1. Purchasing of Phenol for Penta.
2. Purchasing of Solvents
  - Acetone for Newark
  - Isopropanol for St. Louis
  - Fuel Oil for St. Louis
  - WPO for Minneapolis (& Superior)
- (The latter two are being actively pursued.)
3. Engineering assistance to secure, design and layout Umbrella packaging.
4. Would like to have drafting assistance for several weeks to get plant layout prints.

### VI. General Comments

1974 Total invoicing thru March was \$676,209 compared to \$365,832 for the same 1973 period. At this closing there was no outstanding Penta shipments not billed and very little WTC products in terms of dollar value.

TOLS004588

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmens

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 8, 1974

Page 10

### VII Travel Plans

None at this writing.

**R. F. Simmens**

**RFS/sjk**

TOLS004589

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
T. Onett  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman From R. Simmons  
Location Pittsburgh, PA K-750 Location St. Louis, MO  
Subject Monthly Report - February 1974 Date March 2, 1974  
Wood Treating Chemicals Operations

### I. Shipment Highlights - (February Accounting Month)

1. Houston Warehouse - Only two drums of Floc Agents sold - Total \$515.00.

2. Camden Warehouse - 10 Sales totaled for month by:

<u>Product</u>	<u>Container</u>	<u>Units</u>	<u>\$</u>
Woodtox 140 RTU	55 G	550	\$555.50
Penta Wood Conc.	55 G	110	271.70
Penta Stain #509	55 G	275	726.00
Woodtox RTU	55 G	605	902.00
Woodtox RTU	5 G	65	116.00
Woodtox RTU	6 X 1 G	1782	3813.48
Woodtox RTU	12 X 1 Qt.	12	10.80
Penta Wood RTU	5 G	105	143.85
Penta Wood RTU	6 X 1 G	210	476.70

3. Enfield, NC Warehouse - New location just opening. Expect small, numerous sales, so we will show a monthly composite as done for Camden, beginning with March.

4. Newark, CA Warehouse - Major shipments Munnell & Sherrill, Ukiah, CA

40 X 55 G	Liquid Noxtane SSL	6694.60
19 X 55 G	Red End Sealer	1412.32
		<hr/> 8106.92

TOLS004590

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

Page 2

### Cascade Ind. Supply - Redding, CA

4 X 305 G Bins	Liquid Noxtane SS1	3712.46
2 X 345 G Bins	Liquid Noxtane SS1	2099.67
10 X 55 G Drums	Liquid Noxtane SS1	1673.65
10 X 55 G Drums	Liquid Azide	2150.50
		<hr/> 9636.28

### P. B. M Supply - Chico, CA

62 X 55 G	Liquid Noxtane SS1	10711.36
24 X 55 G	Liquid Azide	5161.20
		<hr/> 15872.56

### Capitol Ind. Supply - Salem, OR

2 X 345 G Bins	Liquid Noxtane SS1	2099.67
39 X 55 G Drums	Liquid Noxtane SS1	6527.24
2 X 55 G Drums	Orange End Sealer	143.99
		<hr/> 8770.90

### Munnell & Sherrill - Arcata, CA

1 X 345 G Bin	Liquid Noxtane SS1	1049.84
15 X 55 G Drums	Liquid Noxtane SS1	2510.48
3 X 300 G Bins	Clear End Sealer	1009.80
10 X 55 G Drums	Clear End Sealer	617.10
6 X 55 G Drums	Orange End Sealer	431.97
		<hr/> 5619.19

TOLS004591

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

Page 3

5. Richmond, CA Blender - Major Shipments None

6. Tuscaloosa, AL Blender - Totals by Customer

Tusco Wood Products	14965 G	Woodtox 140	5853.91
Cottondale Wood Products	1602 G	Woodtox 140	626.72
Holman Wood Products	534 G	Woodtox 140	208.89

7. Cotton Valley, LA Blender - Totals by Customer

Ward Davis Company	6151 G	Woodtox 140	2091.34
Great Southern Wirebound Box	21605 G	Woodtox 140	7992.69
Bennett Box Company	6024 G	Woodtox 140	2349.36
Lear - Siegler	8230 G	Woodtox 140	3209.70
Ozark Box & Crating Co	12147 G	Woodtox 140	4374.51
Texas Container	12122G	Woodtox 140	4727.58
Leggett Lumber Co.	6000 G	Woodtox 140	2340.00
Dunnagan Wood Products	4000 G	Woodtox 140	1560.00

8. Minneapolis, MN Blender - Total

Koppers Superior Plant	36246 G	Timbertox 7 1/2%	13878.59
------------------------	---------	------------------	----------

9. Portland, OR Blender - Major Shipments

Morris Lumber Company	2 X 345 G	Bins Timbertox 40	1276.50
*Crown Chemical	16840 Lbs.	Pine Oil	4546.80

\* Raw Material previously written off at end of 1973.

TOLS004592

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. Simmons  
Location \_\_\_\_\_  
Date March 2, 1974

Page 4

### 10. St. Louis, MO (Calendar February Shipments)

Penta	FPD Plants	582, 696	\$146, 304
	Customers	691, 080	172, 770
	(WTC)	<u>113, 440</u>	
		1, 387, 216 Lbs.	

### More Customer Shipments

*Escambia	208, 985
Langdale	84, 000
McCormick & Baxter	81, 900
ACW-Winnfield	42, 200
Atlantic	44, 960
Bell	37, 935

\* Includes 82, 000 against March Allotment picked up  
during last days of February.

### WTC Products - Major Shipments / Customers

Kansas Box	Woodtox 140 RTU	11441 G	3997.78
Bennett Box (Center- ville, IA)	Woodtox 140 RTU	11271 G	4282.98
Bennett Box (Clinton, IA)	Woodtox 140 RTU	5953 G	2262.14
General Box	Woodtox 140 RTU	984 G	501.84
Ozark Box	Woodtox 140 RTU	5982 G	2273.16
Dyer Box	Woodtox 140 RTU	5933 G	2254.54
Bibler Bros.	Woodtox 140 RTU	5939 G	2256.82
Adkins Const.	Woodtox 140 RTU	4030 G	1531.40
Savogram	Woodtox 140 RTU	30 X 55 G	1666.50

TOLS004593

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

Page 5

Louisiana-Pacific	Lumbrella 12 Green	56 X 53 G	7479.36
Transcraft Corp.	Penta Wood RTU	12 X 55 G	798.60
New England Log Homes	Woodtox 140 RTU	50 X 55 G	2447.50
M. T. Inc.	Woodtox RTU	17 X 6 X 1	218.28
Weyerhaeuser (Lewiston, NC)	Various Penta Stains	120 X 4 X 1	1389.60
Weyerhaeuser (Craig, OK)	Liquid Noxtane SS1	52 X 55 G	7865.00 Less Freigh
Asplundh	SPS-30	9753 G	4681.44 Less Freigh
J. W. Jones	Poletox	800 X 60#	14880.00 Less Freigh
Federal Chemical Chemical Specialties	Liquid Noxtane SS1	16 X 55 G	2816.00
Cenex Farmers Union	Timbertreat 625	6 X 55 G	1023.00
Crown Chemicals	Redwood 15 Lumbrella	4 X 53 G	593.60
	Green End Spray	4 X 5 G	105.00
	Preprime Conc.	20 X 55 G	2475.00
	Lumbrella 33 Yellow	20 Pallets	7873.20
	Penta Wood Conc.	10 X 5 G	123.75
	Penta Wood Conc.	20 X 5 G	275.00
	Penta Wood Conc.	30 X 6 X 1 G	554.40
	Woodtox RTU	4 X 55 G	325.60
	Penta Wood RTU	100 X 5 G	685.00 Less Freight
	Coppertreat 120	1 X 55 G	91.96
	Various Penta Stains	15 X 5 G	210.00

Penta invoicing for month - Koppers \$28,728.00  
 Customers 58,115.54

Combined approximately \$180,000 short awaiting Monsanto invoicing to us.

WTC Products invoicing for month \$204,836.89 (Up \$59,600 from Same period last year.)

TOLS004594

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

Page 6

### II. Raw Materials

The following increases have been incurred since our January report:

Northwest Refinery WPO at Minneapolis	.055/Gal.
Mineral Spirits at Tuscaloosa	.075/Gal.
Mineral Spirits at Cotton Valley	.02 /Gal.
Gar Yellow Pigment 12-3016 at St. Louis	.04 /Lb.
Drums all increased approximately	.75 /drum
Most Aromatic Solvents @ St. Louis	.20 - .25 / Gal.

Shortages in almost every raw material continues to occur. Mineral Spirits from Standard Oil is on a 75% allocation for March vs 90% in February. But we will not suffer because of alternate sources. Some alternate materials, such as Methanol for Liquid Noxtane, are drying up; this one because of a Dupont Plant Explosion. If Pittsburgh Purchasing is working for us, we have yet to see much results; in fact, to date, we have received four drums of Ethylene Glycol thru their efforts - and this at an approx. .08/Lb cost increase.

Our needs are extremely critical and we must have within the next month these items to continue manufacture:

For Newark, CA

Ethylene Glycol  
Isopropanol and/or Methanol  
Acetone

For St. Louis

Ethylene Glycol  
Isopropanol and/or Methanol  
Boric Acid

TOLS004595

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

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In addition, Superior FPD Plant needs more Timbertox 7 1/2% Solution than our oil allotment. Jack Hasnauer has made FEO forms out and sent for the oil to Northwestern Refining, but we need someone to push this thru.

Penta Raw materials - Chlorine and Phenol - still are short and purchasing should continue (?) to try to supply these items to Monsanto.

The Dow Penta contract for 1974 has not been producing material for FPD and I urge our upper Echelon to bring pressure upon Dow to live up to their committment for the year in a more orderly fashion, At Once! So far we have received 40,000 pounds in January, nothing against an 80,000 pound committment for February, and only a 30,000 pound promise for March.

You will note that some of our January report 'want list' has not been mentioned in this report. Some items we feel a little more 'comfortable' about this month, but we are continuing to hunt sources for all material at all opportunities.

### III. Inventory

Approximately \$4000 of obsolete material written off at the end of 1973 was recovered this month. We have had on hand since November 1973, \$3200 in materials for the Color Seal project which seems to be in lumbu. All other material stocks are in demand and moving.

### IV Profit Opportunities

Frank Klasnick has just completed a week with us, preparing to file Federal forms to secure new increases on items termed 'Resale Stock'. This is good and needed, but I urge that for those products that still

TOLS004596

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

Page 8

require prenotification to the CLC, we must move now and not wait for another month of increased costs; my prime concern is Woodtox 140 RTU sold at St. Louis where our cost is in excess of selling price.

We have real opportunities for product sales at reasonable margins that are being held in check by lack of raw materials - such as Liquid Noxtane on the West Coast. We also have a great chance to make points with all Penta prospects and customers now that Dow is experiencing so much operating difficulty -- if we had the raw materials or product.

### V Assistance Requirements

Major problems still are purchasing, as noted throughout this report.

### VI General Comments

During the month we were visited several days by an EPA inspector. Net result was (1) The inspector found numerous instances that his office had sent him out with incorrect information to check, (2) Only one instance of an incorrect label being used was found, and (3) One sample (Super Diprite) was taken for analysis.

Also during the month we were visited by Aetna and Kemper insurance inspectors, both of whom seemed satisfied and had no recommendations to make.

### VII Travel Plans, - Tentative for the Month

March 5-9 - Traveling California and Oregon calling on suppliers and prospective suppliers.

March -- or 12 - ROI meeting either at Denver or Grenada.

March 13 - 15 - With J. Hite, Monroeville, Pittsburgh, and Atlanta.

TOLS004597

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 2, 1974

Page 9

Possibility of trip to Federal Energy office - Chicago and Northwest Refinery - Minneapolis later in the month.

R. Simmons

RFS/sjk

TOLS004598

cc: John Messner

January 17, 1974

Neil Gallagher  
Time Oil Company  
P.O. Box 03117-St. John's Sta.  
Portland, Oregon 79203

Dear Neil:

Please send a quart sample (with label) of Woodtox 140 RTU  
to:

Rudolph C. Martinak, Office Manager  
Koppers Company, Inc.  
P.O. Box 530  
Sumner, Washington 98390

Thanks,

R. F. Simmons  
Plant Manager

RFS:mab

TOLS004599

BZTO104(e)041420

**December 31, 1973**

**Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 79203**

**Dear Neil:**

**John Hite from Pittsburgh general office will be out with John Messner on February 4 and 5. Messner will be contacting you to advise that Mr. Hite would like to visit Time Oil while in the area. For your information, John Hite is the assistant manager of the Specialty Wood Chemicals Group of which Wood Treating is a department. We will appreciate the usual fine courtesy extended your visitors and we assure you will find Mr. Hite an energetic and pleasant fellow.**

**Best regards,**

**R. F. Simmons,  
Plant Manager**

**P.S. Have also been intending to drop you a note as a reminder that beginning Jan. 1, 1974, Lot Numbers should begin with WD-001-T.**

**RFS/pc**

**TOLS004600**

BZTO104(e)041421

November 7, 1973

Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 97203

Dear Neil:

You have had on hand 4 drums of Munsell Grey Anstrik over a year. This has now become of questionable quality; please agitate one drum thoroughly, take a quart sample (or equivalent smaller ones) and forward to my attention.

Thanks,

R. F. Simmons,  
Plant Manager

RFS/pc

TOLS004601

BZTO104(e)041422

June 7, 1973

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117  
St. John's Station  
Portland, Ore. 79203

Dear Neil:

Please take an inventory of our material on hand as of closing on June 20, 1973 and report so as to arrive to us in St. Louis not later than Monday, June 25. Any material receipts, production batch sheets, or bills of lading for shipments prior to the inventory should be forwarded.

Attached please find a blank affidavit which is needed to verify the count.

Thank you for your cooperation and if there are any questions, please advise.

Sincerely,

R. F. Simmons,  
Plant Manager

RFS/pc  
Attachment

TOLS004602

BZTO104(e)041423

**April 24, 1973**

Mr. Neil Gallagher  
Time Oil Co.  
12005 N. Burgard Rd.  
P. O. Box 03117  
St. Johns Station  
Portland, Oregon 97203

Dear Neil;

Under separate cover we are sending you a dozen quart sample cans and reshipper cartons for use in sending out product samples to customers as requested.

We have requests to send a quart sample of Timbertox 40 to each of the following:

Mr. Don Dawson, P.A.  
Los Angeles Chemical Co.  
4545 Ardine St.  
Southgate, Calif. 90280

Mr. Sydney H. Gordon  
Purchasing Dept.  
AMVAC Chemical Corp.  
4100 E. Washington Blvd.  
Los Angeles, Calif. 90023

You will find address labels attached. We ask you fill these requests, enclose a product label and send via parcel post on receipt of the cans and cartons.

Thanks,

R. F. Simmons,  
Plant Manager

CC: Customer Files  
Alex Saucedo.

TOLS004603

BZTO104(e)041424

# KOPPERS

## Interoffice Correspondence

To Parker W. Finney  
Location K-2317  
Subject Oregon Inventory Value 1972

From R. F. Simmons  
Location Xood Treating Chemicals Dept.  
St. Louis, Mo. 730  
Date February 28, 1973

Below are listed evaluations of our materials on hand monthly during 1972 at our contract blender, Time Oil Company, 12005 N. Burgard, Portland, Oregon.

No.	Raw Materials	Finished Product	Container	Total
Jan.	\$40,098.23	\$8,620.37	\$359.20	\$49,077.80
Feb.	35,492.15	9,478.71	377.20	45,348.06
Mar.	35,111.54	9,704.13	317.20	45,132.87
Apr.	31,475.10	9,431.23	431.20	41,337.53
May.	26,217.21	27,703.32	879.68	54,800.21
Jun.	34,300.07	8,128.41	879.60	43,308.08
Jul.	31,820.27	7,028.99	1,059.60	39,908.46
Aug.	29,406.34	13,164.51	632.20	43,203.05
Sep.	22,863.32	12,793.12	906.56	36,563.00
Oct.	26,853.20	14,888.22	1,170.48	42,911.90
Nov.	20,633.26	18,920.25	1,235.44	40,388.95
Dec.	23,872.87	10,706.22	1,259.04	37,838.13

In addition, we had the following finished material evaluations in Oregon warehouses in 1972 at month's end as shown.

Faber's, 401 S. Fir Street, Medford, Oregon

Nov. 1,585.81  
Dec. 1,585.81

Mc Cracken Van & Stg. Co., 2155 W. Broadway, Eugene, Oregon.

Jan.	13,734.84	May	6,704.16
Feb.	9,480.20	Jun.	727.35
Mar.	8,191.71	Jul.	606.80
Apr.	6,704.16	Aug.	561.04
		Sep.	561.04

R. F. Simmons

TOLS004604

# KOPPERS

## Interoffice Correspondence

To Parker Finney From R. F. Simmons  
Law & Real Estate Dept. K-2317  
Location Pittsburgh, PA. Location St. Louis, MO.  
Subject Oregon Tax Evaluation 1973 Date February 20, 1974

This will confirm our call to your secretary on the 14th giving the December evaluation for Wood Treating material on hand at Time Oil Company, 12005 N. Burgard, Portland, Oregon; as there appears to be considerable fluctuation from month to month however, we have proceeded to evaluate each month as per your original request.

January	37838.13
February	25155.34
March	39577.01
April	34821.64
May	46224.65
June	31942.46
July	37342.63
August	56996.88
September	53186.43
October	65846.26
November	54910.15
December	58801.77 - 6422.74 Writeoff=52379.03

R. F. Simmons

RFS:mab

TOLS004605

BZTO104(e)041426

**February 7, 1973**

**Mr. Newton Lesh  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 79203**

Dear Mr. Lesh:

As I mentioned to Neil this morning, we have an inquiry about packaged Timbertox 40 Conc. and need to determine your cost to us for packing 6 X 1 gallon cases and 5 gallon pails; would you please quote at your earliest convenience?

The customers estimated requirements are possible 100 6 X 1 gallon cases and 25 X 5 gallon pails every three months.

Sincerely,

**R. F. Simmons,  
Plant Manager**

RFS/pc

**TOLS004606**

BZTO104(e)041427

February 7, 1973

Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 79203

Dear Neil:

Having just completed our phone conversation, I will rewrite my letter to you.

To clear our discrepancy with January inventory, I have written a batch sheet, WC-0004-T for the two batches of 140 RTU produced Jan. 25 and 26. The two batches produced Jan. 8 & 9 should be designated WC-0003-T..

Please be sure George receives samples promptly. It is most important a sample be mailed the same day as the batch is made. It is also very desirable that each bulk delivery of KB-21, WTL oil, and mineral spirits be sampled and sent promptly.

We are attaching a new formula record to be followed in production of Timbertox 40; this change is effective at once so please destroy all other formula records of Timbertox 40.

At the same time, we are consolidating back to one concentrate which will be this new formula, so destroy all formula records of Penta Wood Preservative Concentrate.

Now, to reconcile the inventory of these two products you have on hand (Timbertox 40 and Penta Wood Conc.) do the following.

1. Continue to work off the remaining Penta Wood Concentrate two drums per batch of new formula Timbertox 40 as discussed.

TOLS004607

BZTO104(e)041428

2. Rework the 16 drums of Timbertox 40 on hand which contain sediment, as per the attached sheet, send sample to St. Louis from kettle, drum and hold until ok'ed by us to ship.

In order to rework, proceed like this:

Weigh each drum, pour off the liquid portion into kettle and reweigh drum to secure net weight put into kettle. When all 16 drums thus handled into kettle, add up net weights, calculate amounts of KB-21 and Penta to add while heating. Heat and circulate and make the additions when 150°F. reached. Proceed as in normal manufacture for heating and circulating time.

As we have also discussed, we possibly have package goods business in Timbertox 40 developing and I am writing Mr. Lesh today for a cost for packaging 6 X 1 gallon cases and 5 gallon pails. I would appreciate the earliest consideration you can give this so we can get back to the potential customer.

Thanks,

R. F. Simmons,  
Plant Manager

RFS/pc  
Attachments

TOLS004608

BZTO104(e)041429

cc: R. D. Arsenault  
J. M. Montgomery  
H. P. Struessel

January 4, 1973

Mr. Neil Gallagher  
Time Oil Co.  
12005 N. Burgard Rd.  
Portland, Oregon 97203

Dear Neil:

A decision has been made to discontinue product WR 320. Our records indicate you have none of this product on hand, so it should be a relatively simple matter for you to destroy all labels and confidential formula records and close the issue; please do so promptly. Any future inquiries or orders for the product should be routed to John Messner or this office for disposition.

Thanks,

R. F. Simmons,  
Plant Manager

HPS- Last sale 9/25/72 b/l/61324. Your product listing can be deleted as far as I am concerned.

TOLS004609

BZTO104(e)041430

November 26, 1974

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117, St. John's Station  
Portland, Oregon 79203

Dear Neil:

Yesterday we ordered some one gallon and five gallon cans from General Can Company, Portland, to be sent to you; they could not supply shipping cartons for the gallon cans, so those are being sent to you from St. Louis. This then, will give you material to package sample requests for awhile.

John Culp will be calling you in probably mid-December to fill several (approximately a half drum) five gallon pails of Petroset II for International Paper Company, Longview, Washington. You should prepare a normal bill of lading for the shipment, whether taken by John or shipped by common carrier, so we can relieve our inventory properly; we will otherwise treat the transaction as a no charge sample to the customer. The balance, part drum hopefully will be sold to J. H. Baxter on their next order.

Enclosed are labels for the Petroset II that you repack.

Thanks,

R. F. Simmons  
Operations Manager

RFS/sjk

Enclosures

cc: J. Culp Koppers Company, Inc. P. O. Box 23361 Portland, OR 97223  
J. M. Montgomery  
H. P. Struessel

TOLS004610

BZTO104(e)041431

cc: F. E. Bege  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman From R. F. Simmons  
Location Pittsburgh, PA K/1001 Location St. Louis, Missouri  
Subject Monthly Report September 1975 Date October 7, 1975  
Wood Treating Chemicals

### I. Shipment Highlights - September Accounting Month

#### 1. Camden, New Jersey Warehouse

Van Horn & Metz Company Penta Wood Pres. Conc.	Conshocken, PA 11 X 55 Gal.	2,079.00
PA State Corr., Inst. Woodtox 140 Conc.	Bellefonte, PA 8 X 55 Gal.	1,210.00

#### Balance of Shipments

Woodtox Pre Prime Conc.	2 X 55 Gal.	363.00
Penta Wood Pres. Conc.	1 X 55 Gal.	220.00
Woodtox 140 R TU	5 X 55 Gal.	481.25
Woodtox R TU	9 X 5 Gal.	114.75
Woodtox R TU	1 X 6 X 1 Gal.	18.00
Super Noxtane	13 X 50 Lbs.	279.80

#### 2. Enfield, North Carolina Warehouse

Bemis Hardwood Liquid Noxtane SS 1	Robbinsville, NC 3 X 55 Gal.	1,006.50
Dickert Lumber Co. Liquid Noxtane SS 1	Newberry, SC 3 X 55 Gal.	1,006.50
Gulf States Paper Corp. Lumbrella 33 Yellow	Vance, AL 135 X 3 Gal.	2,895.75
Westvaco Corp. Lumbrella 12 Red Brown	Summerville, SC 15 X 53 Gal.	2,822.25
Union Camp Corp. Lumbrella 33 Redwood	Franklin, VA 162 X 3 Gal.	3,023.94

TOLS004611

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 2

### Enfield, North Carolina Warehouse Continued

Coastal Lumber Co.	Weldon, NC	
Liquid Noxane SS 1	2 X 55 Gal.	671.00
Timbertreat 625	1 X 55 Gal.	280.00
		<u>951.00</u>
Coastal Lumber Co.	Pantego, NC	
Santobrite Pellets	10 X 100 #	620.00
Georgia Pacific Corp.	Murfesboro, NC	
Timbertreat 625	1 X 55 Gal.	257.17
Liquid Noxane SS 1	2 X 55 Gal.	626.31
		<u>883.48</u>
Georgia Pacific Corp.	Enfield, NC	
Santobrite	10 X 100 #	638.40

### Balance of Shipments

Liquid Noxane SS 1	10 X 55 Gal.	3,355.00
Timbertreat 625	2 X 55 Gal.	561.00
Lumbrella 33 Redwood	54 X 3 Gal.	1,336.50
Lumbrella 15 Redwood	2 X 53 Gal.	453.15
Lumbrella 12 Red Brown	4 X 53 Gal.	795.00
Lumbrella 15 Yellow	4 X 53 Gal.	869.20
Super Noxane	44 X 50 #	1,049.00
Santobrite	5 X 100 #	310.00

### 3. Conley, Georgia Warehouse

Tolleson Lumber Co.	Perry, GA	
Liquid Noxane SS 1	4 X 55 Gal.	1,342.00
Georgia Pacific Corp.	Warrenton, GA	
Lumbrella 33 Yellow	135 X 3 Gal.	2,571.99

TOLS004612

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 3

### Conley, Georgia Warehouse Continued

Georgia Pacific Corp. Lumbrella 33 Yellow	Russellville, SC 53 X 3 Gal.	1,031.74
Holly Hill Lumber Co. Lumbrella 33 Yellow	Walterboro, SC 54 X 3 Gal.	980.10
Chas. Ingram Lumber Co. Lumbrella 33 Yellow	Florence, SC 27 X 3 Gal.	668.25
Westvaco Corp. Liquid Noxtane SS1	Summerville, SC 5 X 55 Gal.	1,677.50
Hubert Moore Lumber Liquid Noxtane	Aladaha, GA 15 X 55 Gal.	4,752.00
Paul Fowler Penta Wood Pres. Conc.	Alma, GA 1 X 55 Gal.	220.00

### 4. Newark, California Warehouse

Snyder Lumber Prod. Liquid Noxtane SS1	Turlock, CA 10 X 55 Gal.	3,190.00
Capitol Ind. Supply Liquid Noxtane SS1 Red End Sealer	Salem, OR 59 X 55 Gal. 2 X 55 Gal.	15,170.38 <u>177.65</u> <u>15,348.03</u>
Reliable Hdw Co. Clear End Sealer Liquid Noxtane SS1 Liquid Noxtane SS1 Clear End Sealer Liquid Azide 200	Arcata, CA 3 X 300 Gal. 1 X 345 Gal. 13 X 55 Gal. 6 X 55 Gal. 2 X 55 Gal.	1,262.25 1,612.88 3,342.63 462.83 <u>598.40</u> <u>7,278.99</u>

TOLS004613

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### Newark, California Warehouse Continued

Webb Furniture	Galax, VA	
Liquid Azide 200	2 X 55 Gal.	759.00

Great Western Chemical	Seattle, WA	
Red End Sealer	5 X 55 Gal.	544.50

### 5. Tuscaloosa, Alabama Blender

#### Woodtox 140 R T U - Bulk

Holman Wood Prod.	Northport, AL	495 Gal.	396.00
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### 6. Cotton Valley, Louisiana Blender

#### Woodtox 140 R T U - Bulk

Texas Container	Texarkana, Texas	12033 Gal.	10,228.05
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Bennett Box Co.	Texarkana, Texas	4804 Gal.	4,083.40
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### 7. Portland, Oregon Blender

Jeld Wen Corp.	Flagstaff, Arizona	
Woodtox 140 R T U	6996 Gal.	7,345.80

Brewer Chemical	Honolulu, HI	
Woodtox 140 Conc.	40 X 55 Gal.	5,346.00

Jasco Chemical	Mt. View, CA	
Woodtox 140 Conc.	3072 Gal.	5,068.80

J. H. Baxter and Co.	Eugene, OR	
Petroset II	7 X 460 #	2,479.40

TOLS004614

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date October 7, 1975

Page 5

### Portland, Oregon Blender Continued

Gilsonite Co.	Portland, OR	1,164.35
Redy Coat Penta R T U	29 X 55 Gal.	
Morris Lumber Co.	Grants Pass, OR	
Timbertox 40 Conc.	4 X 55 Gal.	825.00

### 8. St. Louis, Missouri

#### W T C Products - Major Shipments

Koppers	Oroville, California	
W T C # 71	6 X 515 #	2,288.30
Blue Anstrik 1-50	2 X 5 Gal.	300.00
		2,988.30

Koppers	Monticello, Mississippi	
Liquid Noxtane SS 1	3 X 55 Gal	1,006.50
Timbertreat 625	3 X 55 Gal	841.50
		1,848.00

Koppers	Magnolia, Arkansas	
K L B Beam Sealer	10 X 55 Gal.	1,045.00

Elco Mfg. Company	Sharpsburg, PA	
Woodtox PrePrime Conc.	3845 Gal.	9,035.75

Wm. Barr and Company	Memphis, Tennessee	
Woodtox PrePrime Conc.	4002 Gal.	8,404.20

Burton Enterprises Inc.	Cobleskill, N.Y.	
kWoodtox PrePrime R T U	4042 Gal.	3,314.44

TOLS004615

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### St. Louis, Missouri Continued

Weathershield Mfg. Woodtox PrePrime R T U	Medford, Wisconsin 4002 Gal.	3,281.64
Malta Mfg. Company Woodtox PrePrime R T U	Malta, Ohio 5926 Gal.	4,859.32
Crestline Woodtox Pre Prime R T U	Wausau, Wisconsin 5745 Gal.	4,710.90
Hurd Millwork Company Woodtox Pre Prime R T U	Medford, Wisconsin 4010 Gal.	3,288.20
Northern Sash Woodtox Pre Prime R T U	Hawkins, Wisconsin 4007 Gal.	3,285.74
Bennett Box Woodtox 140 R T U	Clinton, IA 4549 Gal.	3,866.65
J. R. Gian Woodtox 140 R T U	St. Louis, Missouri 3982 Gal.	3,384.70
Federal Chemical Co. Penta Stain Base Conc.	Indianapolis, Ind. 20 X 55 Gal.	4,235.00
Universal Corp. Penta Wood Pres. Conc.	Columbus, Ohio 3926 Gal	9,618.70
Southwest Forest Ind. WK - 60 Solvent	Prescott, Arizona 71830 #	7,542.15
Louisiana Pacific Corp. Lumbrella 12 Green	Winnfield, LA 55 X 53 Gal.	9,619.50

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### St. Louis, Missouri Continued

Red Hill Chip Corp Lumbrella 25 Cherry Tone	Conway, S.C. 8 X 55 Gal.	2,332.00
Columbia Forest Ind. Lumbrella 25 Cherry Tone	Riegel Wood, N. C. 7 X 55 Gal.	2,184.84
E T C Chemical Co. Lumbrella 33 Yellow Liquid Noxtane SS 1	Hattiesburg, Mississippi 324 X 3 Gal. 6 X 55 Gal.	5,904.90 <u>1,811.70</u> <u>7,716.60</u>
Buchanan Lumber Co. Liquid Noxtane 1 Timbertreat 625	Montgomery, AL. 4 X 55 Gal. 2 X 55 Gal.	1,100.00 <u>561.00</u> <u>1,661.00</u>
G. S. Robins Santobrite # 2 Fines	St. Louis, Missouri 60 X 100 #	2,700.00
Fort Ligonier Mem Found. Woodtox Pre Prime R T U Woodtreat A A	Ligonier, PA 2 X 55 Gal. 75 X 40 #	203.50 <u>1,710.00</u> <u>1,913.50</u>
Myron Johnson Penta Stain # 502 Penta Stain # 506 Penta Wood Pres. Conc.	Cincinnati, Ohio 36 2/3 X 6 X 1 Gal. 10 X 6 X 1 Gal. 4 X 5 Gal.	1,012.00 276.00 <u>94.00</u> <u>1,382.00</u>

TOLS004617

# KOPPERS

## Interoffice Correspondence

To R. E. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date October 7, 1975

Page 8

### St. Louis, Missouri Continued

#### Balance of Shipments

Woodtox Pre Prime R TU	11 X 55 Gal.	915.75
Woodtox 140 R TU	16 X 55 Gal.	1,388.75
Woodtox 140 Conc.	6 X 5 Gal.	102.00
Woodtox R TU	1 X 55 Gal.	101.75
Woodtox R TU	10 X 5 Gal.	127.50
Woodtox R TU	15 X 6 X 1 Gal.	270.00
Penta Wood Pres. Conc.	4 X 55 Gal.	792.00
Penta Wood Pres. Conc.	34 X 5 Gal.	604.00
Penta Wood Pres. Conc.	10 X 6 X 1 Gal.	243.00
Penta Wood Pres. R TU	250 Gal.	160.00
Penta Wood Pres. R TU	3 X 55 Gal.	266.20
Penta Wood Pres. R TU	12 X 5 Gal.	150.00
B Wood Pres.	12 X 5 Gal.	99.00
B Wood Pres.	43 X 6 X 1 Gal.	619.20
Lumbrella 15 Redwood	2 X 53 Gal.	471.70
Liquid Noxtane SS 1	1 X 55 Gal.	335.50
Poletreat 15	10 X 45 #	207.00
C Pole Wrapper	7 Rolls	26.95
WTC # 71	1 X 515 #	468.65
WTC # 72	1 X 40 #	20.40
Super Noxtane	61 X 50 #	1,406.50
Penta Stain # 502	2 X 55 Gal.	440.00
Penta Stain # 502	10 X 5 Gal.	230.00
Penta Stain # 506	20 X 5 Gal.	435.00
Penta Stain # 507	3 X 5 Gal.	68.25
Penta Stain # 509	1 X 55 Gal.	206.25

TOLS004618

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### St. Louis, Missouri Continued

#### Invoicing for September Accounting Month

		<u>1975</u>	<u>1974</u>
Penta	Koppers Plants	\$ 120,504	\$ 179,952
	Customers	\$ 53,816	\$ 238,883
W T C Products		\$ 219,017	\$ 269,398
Grand Total		\$ 393,337	\$ 688,233

### II. Raw Materials

We are out of Hercules X-3492 Yellow pigment for Lunabrella 33 Yellow, and while Hercules is supposed to be working on the problem, we may have our own problem in not having product for sale within about two weeks. No alternates have been found for the Hercules material; testing on candidate replacements continue as samples are received.

As a result of recent steel price increases, the container industry is in process of again raising pail and drum prices. We anticipate 60¢ per drum increases by November 15.

Two co-solvents have increased effective October 1; KB - 3 from .04 to .05 per pound FOB Kingsport, Tennessee and Heavy Oxo Bottoms from .08 to .10 per pound FOB Texas City, Texas.

We expect other solvents to increase, to some extent dependent on market conditions and refinery inventories, but more dependent on government regulations and price increases on crude oil. Acetone, isopropanol and some aromatic oils have all increased in the past few weeks and fuel oils and mineral spirits are sure to follow in four to eight weeks.

On the market, dry pigment have also begun to increase in the last few days, so the dispersions we purchase will also increase shortly.

TOLS004619

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 10

### III. Inventory

18,000 gallons of the old Woodtox 140 R T U has been sold at Tuscaloosa; 14,900 gallons remain to be moved from this location. Two truckloads of the old product have moved from St. Louis, but totally considering the concentrate and R T U on hand, there still is 40,000 gallons in St. Louis to be sold.

\$2800 of slow moving inventory (Santobrite powder) was sold during the month; we again ask Sales attention be directed to the \$12,700 of material on the list provided July 1.

Inventory evaluation as of September 20 shows a \$ 30,000 inventory reduction since June in spite of several substantial raw material increases.

### IV. Profit Opportunities

We probably have booked most all the penta orders we can expect in the October accounting month; this amounts to:

	<u>LBS</u>	<u>\$</u>
Koppers	399,300	151,734
Customers	266,105	101,120
Total	665,405	252,854

Orders Are:

	<u>Koppers Plants</u>	<u>Customers</u>
80,000 Lbs.	Montgomery (Bulk)	25,200 Elrod (Bags)
79,800 Lbs.	Montgomery (Bags)	39,305 Escambia (Blocks)
39,900 Lbs.	Houston (Bags)	44,100 Dant & Russell (Bags)
79,800 Lbs.	Florence (Bags)	42,000 Koppers-Hickson (Bags)
39,900 Lbs.	Gainesville (Bags)	31,500 Christian (Bags)
39,900 Lbs.	Grenada (Bags)	42,000 Walker-Williams (Bags)
40,000 Lbs.	Charleston (Blocks)	40,000 Bell Lumber (Blocks)

# KOPPERS

## Interoffice Correspondence

To E. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 11

All Koppers Plants and an extensive list of customers have been contacted.

Reflected in sales as of the accounting month closing is 495 gallons of Woodtox 140 RTU at Tuscaloosa, 16837 at Cotton Valley, 6996 gallons at Portland, and 9411 gallons at St. Louis; since closing, 36300 gallons more have shipped from all locations. We don't have hopes for a return of great months in 140 RTU sales, but these sales do show a big improvement over recent months.

Woodtox PrePrime sales continue to be good. We have made a truckload sale to one new customer, Marvin Windows at Warroad, Minnesota, for October and hope to secure another new account also in October.

### V. Assistance Requirements

1. More order for WTC Products
2. Hard sell on Penta. We have to be losing accounts; our customer list now probably totals under twenty accounts, while two years ago, it was well over fifty.
3. Need for lower cost components, particularly for Liquid Noxtane and Lumbrellas.
4. Continued searching for less expensive, better co-solvents.
5. Reallocation of overhead burden.

### VI. General Comments

#### Forecast for October Sales

Penta	Koppers	151,734
	Customers	117,000
	WTC Products	<u>225,000</u>
		\$493,734

TOLS004621

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 12

### VII. Travel

September - None

October - Tentative

2 Days Wisconsin

2 Days Tuscaloosa - Cotton Valley

R. F. Simmons

RFS/sjk

TOLS004622

August 22, 1975

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117, St. John's Station  
Portland, Oregon 79203

Dear Neil:

Enclosed are new formula records for your book; please manufacture only to these formulas from now on, removing the old formulas from your book and destroying them. Harold is sending you new labels; until received however, you may use current labels on the 'T' products; as new 'T' labels are received, the old stock should be destroyed.

Good luck fishing.

Yours very truly,

R. F. Simmons  
Operations Manager

RFS/sjk

Enclosure

TOLS004623

BZTO104(e)041444

July 22, 1973

Myers Drum Co.  
8435 N. E. Killingsworth St.  
Portland, Oregon 97220

Attention: Billing Department

Gentlemen:

We have just received your invoice N-4072 covering 240 drums delivered on 5/30/73 to Time Oil Co. in Portland, Oregon against our blanket order 16-57-5005. This invoice should have been sent directly to St. Louis, Mo. for payment rather than to Time Oil Co. Due to this misunderstanding we have lost our discount in the amount of \$15.06 besides being last with payment of the invoice. Please change your records to show the bill to address at 5137 Southwest Ave. St. Louis, Mo. Thank you.

Yours truly,

R. F. Simmons,  
Operations Manager

RFS/pdc

cc: Neil Gallagher  
Time Oil Co.

TOLS004624

BZTO104(e)041445

June 3, 1975

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117  
St. John's Station  
Portland, OR 79203

Dear Neil:

Koppers' Forest Products Division is taking a complete physical inventory as of closing the evening of June 20, 1975. Accordingly, please take the inventory and mail so as to arrive in St. Louis by Monday, June 23.

It will be necessary also to complete the enclosed affidavit.

Best regards,

R. F. Simmons  
Operations Manager

RFS/pdc

Enclosure

TOLS004625

BZTO104(e)041446

May 9, 1975

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117 - St. John's Station  
Portland, Oregon 79203

Dear Neil:

We are writing to inform you of a recent oil spill at one of our customers' plant and resultant action because they were slow in reporting it. The wood preserving plant, operating on an inland stream, had a small spill and apparently were negligent in immediately reporting it to the authorities. The coast guard considered the slowness in reporting to be a criminal offense and the president and an employee who was considered the lowest one in line authority to instruct personnel on spill procedure handling was hauled into court. Fortunately, it was our customers' good fortune to draw an understanding judge who thought they were not trying to evade the law and assessed only a \$100 fine; we understand the fine could have been \$5000.

We bring this incident to you as information only in the hope that we all are more vigilant in guarding against industrial pollution.

Best Regards,

R. F. Simmons  
Operations Manager

RFS/sjk

TOLS004626

BZTO104(e)041447

# KOPPERS

## Interoffice Correspondence

To Parker W. Finney

From R. F. Simmons

Location Pittsburgh, PA K/2317

Location W T C St. Louis, Missouri

Subject Oregon Personal Property  
Tax Information - 1974

Date January 29, 1975

The inventory value of our material at Time Oil Company, 12005  
N. Burgard Road, Portland, Oregon by month is as follows:

January	1974	\$ 31,763.51
February	1974	\$ 40,008.23
March	1974	\$ 41,684.53
April	1974	\$ 66,106.00
May	1974	\$ 62,042.15
June	1974	\$ 46,042.08
July	1974	\$ 38,437.09
August	1974	\$ 52,155.71
September	1974	\$ 46,150.71
October	1974	\$ 49,607.47
November	1974	\$ 60,415.92
December	1974	\$ 63,365.37

R. F. Simmons

RFS/sjk

cc: R. G. Hamilton

TOLS004627

# KOPPERS

## Interoffice Correspondence

To A. J. Eisenbeis, Jr.  
Location Law-Tax K442  
Subject Oregon Corporate or Excise Tax Forms

From R. F. Simmons  
Location Wood Treating Chemicals Dept.  
St. Louis, MO. 730  
Date January 31, 1975

Enclosed are Oregon Corporate Excise or Income tax forms received today. As you know, we market products primarily shipped from our blending location, Time Oil Co. at Portland, Oregon. We forward these for your consideration as to filing with the state of Oregon.

R. F. Simmons

TOLS004628

December 17, 1976

Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 97203

Dear Neil:

Please be reminded that for all intent and purpose Koppers starts a new year effective with business of December 20. Your batches should begin renumbering again as of this date with a WH prefix, such as WH-001-T.

Thanks for your attention to this detail.

Best regards,

R. F. Simmons,  
Operations Manager

RFS/pdc

TOLS004629

BZTO104(e)041450

# KOPPERS

## Interoffice Correspondence

cc: T. A. Beatty  
F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. F. Taylerson

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report October 1976

Date October 29, 1976

### Wood Treating Chemicals

#### (1) Shipment Highlights - October Accounting Month

##### 1. Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	23 X 55 Gal.
Woodtox Preprime RTU	1 X 55 Gal.
Woodtox 140 RTU	10 X 55 Gal.
Penta Stain #509	1 X 55 Gal.
Super Noxtane	32 X 50 Lbs.

##### 2. Enfield, North Carolina Warehouse

Lumbrella 15 Redwood Hard	14 X 55 Gal.
Lumbrella 33 Redwood Hard	40 X 5 Gal.
Lumbrella 33 Redwood Soft	108 X 3 Gal.
Lumbrella 33 Redwood Soft	18 X 55 Gal.
Lumbrella 33 Yellow Soft	3 X 55 Gal.
Lumbrella 25 Cherry Tone	4 X 55 Gal.
Green End Spray 400	5 X 55 Gal.
Liquid Noxtane SSI	8 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Dowicide G-ST Beads	39 X 100 Lbs.

##### 3. Conley, Georgia Warehouse

Lumbrella 33 Yellow Hard	12 X 55 Gal.
Lumbrella 33 Yellow Soft	5 X 55 Gal.
Lumbrella 33 Redwood Soft	10 X 55 Gal.
Lumbrella 33 Redwood Soft	54 X 3 Gal.
Green End Spray 400	5 X 55 Gal.
Liquid Noxtane SSI	17 X 55 Gal.
Timberfreat 625	1 X 55 Gal.

TOLS004630

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### 4. Newark, California Warehouse

Liquid Noxtane SSI	93 X 55 Gal.
Liquid Noxtane SSI	2 X 345 Gal.
Liquid Azide 200	3 X 55 Gal.
Clear End Sealer	2 X 300 Gal.
Blue End Sealer	2 X 55 Gal.

### 5. Cotton Valley, Louisiana Blender

Woodtox 140 RTU	12,893 Gal. Bulk
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### 6. Portland, Oregon Blender

Woodtox Preprime RTU	15,517 Gal. Bulk
Woodtox Preprime RTU	80 X 55 Gal.
Woodtox 140 Conc.	3,062 Gal. Bulk
Woodtox 140 RTU	1,996 Gal. Bulk
Woodtox 140 RTU	20 X 55 Gal.
Timbertox 40 Conc.	2,996 Gal. Bulk
Redy Coat Penta RTU	20 X 55 Gal.
Redy Coat Penta Conc.	20 X 55 Gal.
Petroset LL	8 X 460 Lbs.

### 7. Saugat, Illinois Blender

Penta Wood Pres Conc.	8,006 Gal. Bulk
-----------------------	-----------------

### 8. Phoenix, Arizona Blender

Woodtox 140-T RTU	6,938 Gal. Bulk
-------------------	-----------------

TOLS004631

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### 9. St. Louis, Missouri Plant

Woodtox Preprime RTU	29,772 Gal. Bulk
Woodtox Preprime RTU	14 X 55 Gal.
Woodtox RTU	5,606 Gal. Bulk
Woodtox RTU	26 X 5 Gal.
Woodtox RTU	10 X 6 X 1 Gal.
Woodtox Preprime Conc.	20 X 55 Gal.
Woodtox Preprime Conc.	2 X 5 Gal.
Wood Sealer Alkyd Resin	75 X 5 Gal.
Woodtox 140 Conc.	5 X 55 Gal.
Woodtox 140 RTU	10 X 55 Gal.
Woodtox 152 RTU	3 X 5 Gal.
Timbertox D-5	6,003 Gal. Bulk
Timbertox D-5	132 X 55 Gal.
Timbertox D-5	2 X 5 Gal.
Penta Wood Pres. Conc.	36 X 55 Gal.
Penta Wood Pres Conc.	50 X 5 Gal.
Penta Wood Pres. Conc.	72 X 6 X 1 Gal.
Penta Wood Pres. RTU	1 X 5 Gal.
Timbertreat 625	8 X 55 Gal.
Timbertreat 625	1 X 5 Gal.
Liquid Noxtane SSI	5 X 55 Gal.
Lumbrella 12 Red Brown	2 X 55 Gal.
Lumbrella 25 Cherry Tone	60 X 55 Gal.
Lumbrella 33 Cherry Tone	27 X 3 Gal.
Lumbrella 33 Yellow Soft	81 X 3 Gal.
Woodset 310	2 X 55 Gal.
WR-340 Conc.	48 X 408 Lbs.
Clear End Sealer	2 X 55 Gal.
Wood Seal Wax	2 X 426 Lbs.
KLB Beam Sealer	8 X 55 Gal.
KLB Beam Sealer	6 X 5 Gal.
Super Noxtane	420 X 50 Lbs.
Super Noxtane	20 X 100 Lbs.
Anstrik Blue Conc.	1 X 5 Gal.
WTC #71	11 X 515 Lbs.
WTC #74	2 X 460 Lbs.
Penta Stains	12 X 55 Gal.
" "	SY SGAI

TOLS004632

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Woodtreat AA                            3 X 410 Lbs.  
Woodtreat AA                            9 X 40 Lbs.

### Penta Shipments (Lbs.) October Calendar Month

	1976	1975
FPD Plants	<u>498,955</u>	<u>368,952</u>
Customers	<u>362,666</u>	<u>250,707</u>
WTC	<u>32,600</u>	<u>35,400</u>
Total	894,221	655,059

### Invoicing - October Accounting Month - \$

	1976	1975		
	Month	YTD	Month	YTD
FPD Plants - Penta	<u>236,865</u>	<u>1,703,966</u>	<u>174,972</u>	<u>1,609,023</u>
Customer - Penta	<u>252,106</u>	<u>1,524,358</u>	<u>95,838</u>	<u>1,192,649</u>
WTC Products	<u>258,405</u>	<u>2,419,715</u>	<u>206,955</u>	<u>2,150,349</u>
Total	747,376	5,648,039	477,765	4,942,021

### (II) Raw Materials

Penta - Monsanto's plant going into two week maintenance shutdown with what appears to be adequate inventory to handle all orders for the period.

Solvents - Better grades of mineral spirits (i.e. low end point, exempt material) appear to be raising to .46/gallon soon; this is at least 2¢ gallon more than had been expected. Most aromatic solvents are also increasing .02 - .05 gallon.

Pigments - Thalo blues and greens increasing substantially, yellows up .05/Lb. in dispersions.

There are no supply problems.

TOLS004633

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### (III) Inventory

October Purchases -	Raw Materials	140,702
	Containers	9,773
	WTC Resale Stock	688
		<u>151,163</u>

Raw material transferred to finished goods 129,038

We are aiming for \$500,000 inventory December closing total all WTC locations.

### (IV) November Sales Forecast

	Lbs.	\$	\$ Nov. 1975
FPD Plants Penta	<u>476,446</u>	<u>200,100</u>	<u>166,952</u>
Customers Penta	<u>300,400</u>	<u>119,800</u>	<u>178,014</u>
WTC Products		<u>240,000</u>	<u>134,200</u>
Total		<u>559,900</u>	<u>478,166</u>

### (V) Assistance Requirements

1. Selling - During the last two months of every year, purchasing is deferred all possible; sales effort needs to be redoubled to avoid poor months of November and December.

2. Clarification of the sodium penta situation. Can we make Super Noxane with non-registered sodium penta legally? Can registration of foreign material be done?

### (VI) General Comments

In regard to our report last month that Triangle Refineries had requested we vacate at Cotton Valley, their management has not made a decision on our proposal and in the interim we are being allowed to continue the operation under our old conditions.

TOLS004634

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

The plant employees, with one exception, have completed their medical check-ups; the one remaining is scheduled in November.

Installation of the oil separator and concrete ditching is ten days from being complete, work in progress.

### (VII) Travel & Meetings

#### October

2 days - Operation Improvement  
1 day - Lee Allison, Loss Prevention Survey  
1/2 day - Monsanto

#### November

2 days - Operation Improvement  
? - Sales Meeting  
2 days - Vacation

R. F. Simmons

RFS/pdc

TOLS004635

October 27, 1976

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 97203

Dear Neil:

Lately we have not been receiving samples of production batches. At the present time we do not have samples of the following:

WF0055T- Woodtax Preprime RTU  
WF0067T- Woodtax 140 Conc.  
WF0068T- Timbertox 40 Conc.  
WF0070T- Timbertox 40 Conc.

Neil, it is essential that we receive a sample of every batch produced, and that you also have a retain sample in case of loss in transit or damage. Would you check your retain samples for the above batches and forward to us. Thanks.

Best regards,

R. F. Simmons,  
Operations Manager

RFS/pdc

TOLS004636

BZTO104(e)041457

cc: T. A. Beatty  
F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To J. D. Hite From R. F. Simmons  
Location K-1001 Location Ast. Louis, Mo.  
Subject Monthly Report September 1976 Date October 4, 1976

### Wood Treating Chemicals

#### (1) Shipment Highlights - September Accounting Month

##### 1. Camden, New Jersey Warehouse

Van Horn Metz Co.	Conshohocken, PA	
Penta Wood Pres. Conc.	13 X 55 Gal.	2445
Balance of shipments:		
Woodtox Preprime Conc.	4 X 55 Gal.	759
Woodtox 140 Conc.	4 X 55 Gal.	682
Woodtox 140 RTU	1 X 55 Gal.	96
Penta Wood Pres. Conc.	4 X 55 Gal.	858
Penta Wood Pres. RTU	3 X 55 Gal.	248
Penta Stain #509	3 X 55 Gal.	677
Super Noxtane	10 X 50 Lbs.	295

##### 2. Enfield, North Carolina Warehouse

J. S. Turner & Sons	Weldon, NC	
Dowicide GST	20 X 100 Lbs.	1560

##### Georgia Pacific Corp.

Enfield, N.C.		
Dowicide GST	5 X 100 Lbs.	435
Milwaukee, NC		
Super Noxtane	20 X 50 Lbs.	529
Dudley, NC		
Lumbrella 33 Redwood	5 X 55 Gal.	1458
Green End Spray	1 X 55 Gal.	286
Whiteville, NC		
Lumbrella 33 Redwood	3 X 55 Gal.	875
Green End Spray	1 X 55 Ga.	286
Prosperity, SC		
Green End Spray	2 X 55 Gal.	572

TOLS004637

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

Beasley Lumber Prod  
Lumbrella 33 Redwood  
Dowicide GST

Scotland Neck, NC

5 X 55 Gal.	1540
6 X 100 Lbs.	510
	<u>2050</u>

Union Camp Corp.  
Lumbrella 33 Redwood

Franklin, VA

81 X 3 Gal.	1470
-------------	------

Kempsville Bldg. Materials  
Lumbrella 33 Redwood

Virginia Beach, VA

54 X 3 Gal.	1223
-------------	------

Vaughan Bassett Furn.  
Liquid Noxtane SSI  
Super Noxtane

Galax, VA

4 X 55 Gal.	1342
10 X 50 Lbs.	285
	<u>1627</u>

**Balance of shipments:**

Timbertreat 625  
Liquid Noxtane SS I  
Lumbrella 15 Redwood  
Lumbrella 12 Red Brown  
Dowicide GST  
Super Noxtane

2 X 55 Gal.	552
2 X 55 Gal.	671
1 X 53 Gal.	236
2 X 53 Gal.	403
7 X 100 Lbs.	595
20 X 50 Lbs.	570

3. Conley, Georgia Warehouse

Union Camp Corp.  
Lumbrella 33 Redwood

Franklin, VA  
81 X 3 Gal.

1470

**Georgia Pacific Corp.**

Prosperity, SC  
Green End Spray  
Warrenton, GA  
Lumbrella 33 Yellow  
Russellville, SC  
Green End Spray  
Liquid Noxtane SSI  
Lumbrella 33 Redwood

1 X 55 Gal.	286
27 X 3 Gal.	490
1 X 55 Gal.	286
1 X 55 Gal.	324
7 X 55 Gal.	2041

TOLS004638

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### Balance of shipments:

Liquid Noxtane SS I	3 X 55 Gal.	1007
Woodtox Preprime Conc.	2 X 55 Gal.	380

### 4. Newark, California Warehouse

P.B.M. Supply	Chico, CA	
Liquid Noxtane SS I	80 X 55 Gal.	20571
Liquid Azide 200	8 X 55 Gal.	2394
Pallets	21 Ea.	218
		<u>23183</u>

Capitol Industrial Supply	Salem, OR	
Clear End Sealer	8 X 55 Gal.	693
Liquid Noxtane SS I	42 X 55 Gal.	11434
Liquid Noxtane SS I	5 X 345 Gal.	8539
		<u>20666</u>

Weyerhaeuser Co.	Everett, WA	
Liquid Noxtane SS I	20 X 55 Gal.	6050
Cascade Industrial Supply	Klamath Falls, OR	
Liquid Noxtane SS I	2 X 345 Gal.	3225
Liquid Azide 200	6 X 55 Gal.	1795
Liquid Noxtane SS I	24 X 55 Gal.	6171
		<u>11192</u>

### Balance of shipments:

Red End Sealer	5 X 55 Gal.	619
Liquid Azide 200	2 X 55 Gal.	803

TOLS004639

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### 5. Cotton Valley, Louisiana Blender

#### Woodtax 140 RTU Bulk

General Box Div.	Houston, TX	4964 Gals.	3971
Leggett Lbr. Co.	Livingston, TX.	6092 Gals.	5056

### 6. Portland, Oregon Blender

Cascade Industrial Supply	Klamath Falls, OR		
Woodtax Preprime RTU	80 X 55 Gal.	6732	
Woodtax Preprime RTU	1472 Gals.	1325	
		8057	

Clear Pine Moulding	Prineville, OR		
Woodtax Preprime RTU	13138 Gals.	11955	

Brewer Chemical	Honolulu, HI		
Woodtax 140 Conc.	40 X 55 Gals.	5346	

B & F Box & Lbr.	Los Almitos, CA		
Woodtax 140 Conc.	20 X 55 Gals	3135	

Gilsonite Inc.	Portland, OR		
Redy Coat Penta RTU	20 X 55 Gal.	880	
Redy Coat Penta Conc.	30 X 55 Gal.	4125	
		5005	

Reliable Hardware	Arcata, CA		
Woodtax Preprime RTU	2999 Gals.	2699	

R. F. Nickel Co.	Sacramento, CA		
Woodtax 140 RTU	20 X 55 Gal.	1450	

Balance of shipments:			
Timbertox 40 Conc.	1 X 55 Gal.	206	
WR 340 Conc.	6 X 408 Lbs.	490	

TOLS004640

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### 7. Saugat, Illinois Blender

#### Penta Wood Pres. Conc. Bulk

Follen Wood Pres.	Jackson, MS	4483 Gals.	8607
Hood Lumber Co.	Hattiesburg, MS	4244 Gals.	8361

### 8. Phoenix, Arizona Blender

#### Woodtax 140 T Bulk

Jeld Wen Co.	Flagstaff, AZ	6938 Gals.	7146
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### 9. St. Louis, Missouri Plant

#### WTC Products Major Shipments

#### Woodtax Preprime RTU Bulk

Marvin Windows	Warroad, MN	5615 Gals.	4941
Vetter Mfg. Co.	Stevens Point, WI	2216 Gals.	1950
Rockdale Sash	Joliet, IL	4018 Gals.	3536
Crestline	Wausau, WI	11834 Gals.	10414
Jos. C. Klein Co. Schenectady, NY		2003 Gals.	1763
Northern Sash & Door	Hawkins, WI	3576 Gals.	3147
Caradco Window	Rantoul, IL	5914 Gals.	5204

#### Other Bulk Shipments

Wm. Barr Co.	Memphis, TN	
Woodtax Preprime Conc.	6000 Gals.	13500
New Idea	Coldwater, OH	
Woodtax 140 RTU	4012 Gals.	3410
J. R. Ginn & Co.	St. Louis, MO	
Woodtax 140 RTU	3920 Gals.	3332

TOLS004641

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

De Soto Inc. Woodtax RTU	Elgin, IL 4987 Gals.	4389
Universal Coop. Penta Wood Pres. Conc.	Napoleon, OH 8699 Gals.	22617
Norton Mfg. Co. Timbertox D-5	Memphis, TN 5707 Gals.	3538

### Drum Shipments

T & R Chemicals Woodtax 140 Conc.	Clint, TX 75 X 55 Gal.	10209
Asplundh Tree Expert Poletax Poletax	Willow Grove, PA 20 X 380 Lbs. 300 X 60 Lbs.	4560 11340 <u>15900</u>
Westvaco Corp. Lumbrella 25 Brown	Summerville, SC 10 X 55 Gal.	3080
Georgia Pacific Corp. Lumbrella 33 Redwood	Whiteville, NC 5 X 55 Gal.	1458
Georgia Pacific Corp. Dowicide GST	Port Wentworth, GA 20 X 100 Lbs.	1684
Amsco Div. Penta Wood Pres. Conc. Woodtax Preprime Conc.	Minneapolis, MN 15 X 55 Gal. 5 X 55 Gal.	2970 839 <u>3809</u>
Frank Miller Lumber Super Noctane Timbertreat 625	Union City, TN 40 X 50 Lbs. 2 X 55 Gals.	1120 561 <u>1681</u>

TOLS004642

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### Koppers Plants Shipments

Anstrik Blue Conc.	4 X 5 Gals.	600
Anstrik Sagebrush Green	2 X 55 Gals.	363
Liquid Noxtane SS 1	5 X 55 Gals.	1678
Timbertreat 625	3 X 55 Gals.	842
KLB Beam Sealer	12 X 55 Gals.	1188

### Balance of shipments:

Woodtox Preprime Conc.	5 X 55 Gal.	908
Woodtox Preprime RTU	10 X 55 Gal.	2200
Woodtox 152 RTU	10 X 5 Gal.	120
Woodtox RTU	2 X 55 Gal.	220
Woodtox RTU	9 X 5 Gal.	128
Wood Sealer Alkyd Resin	1 X 55 Gal.	127
Penta Wood Pres. Conc.	3 X 55 Gal.	660
Penta Wood Pres. Conc.	28 X 5 Gal.	580
Penta Wood Pres. RTU	3 X 55 Gal.	248
Penta Wood Pres. RTU	2 X 5 Gal.	10
WR 340 Conc.	10 X 408 Lbs.	816
Liquid Noxtane SS 1	4 X 55 Gal.	1308
Timbertreat 625	1 X 5 Gal.	36
Lumbrella 33 Yellow	27 X 3 Gal.	441
Lumbrella 33 Redwood	27 X 3 Gal.	668
KLB Beam Sealer	1 X 55 Gal.	107
KLB Beam Sealer	2 X 5 Gal.	23
Wood Seal Wax	1 X 426 Lbs.	166
Wood Seal Wax	1 X 40 Lbs.	19
Clear End Sealer	1 X 55 Gal.	113
Clear End Sealer	2 X 5 Gal.	35
Super Noxtane	1 X 30 Lbs.	18
Woodtreat AA	5 X 40 Lbs.	132
Penta Stains	30 X 5 Gal.	631

# KOPPERS

## Interoffice Correspondence

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From \_\_\_\_\_

Location \_\_\_\_\_

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Subject \_\_\_\_\_

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### Penta Shipments (Lbs.) September Calendar Month

	1976	1975
FPD Plants	<u>623,356</u>	<u>359,175</u>
Customers	<u>421,696</u>	<u>250,234</u>
WTC	<u>203,726</u>	<u>75,500</u>
Total	<u>1,248,778</u>	<u>684,909</u>

### Invoicing - September Accounting Month

	1976	1975		
	Month	YTD	Month	YTD
FPD Plants -Penta	<u>168,254</u>	<u>1,467,101</u>	<u>120,504</u>	<u>1,434,051</u>
Customer - Penta	<u>129,398</u>	<u>1,272,252</u>	<u>53,816</u>	<u>1,096,811</u>
WTC Products	<u>296,637</u>	<u>2,161,310</u>	<u>219,017</u>	<u>1,943,394</u>
Total	<u>594,289</u>	<u>4,900,663</u>	<u>393,337</u>	<u>4,474,256</u>

### (II) Raw Materials

Penta - Inventory position has not improved since last month. On hand stock at just about any given time is 300,000 Lbs. -- All in bags, and very little in blocks. During September one T/L to Florence shipped 7 X 1M blocks short, but no other loads were shorted or delayed account of block shortage.

The scheduled penta plant maintenance shutdown is now scheduled for the first two weeks of November. We estimated our needs for October and November to Monsanto on 9/23/76 as follows: (thousands/lbs.)

	Blocks				
	Bag	Bulk	1M	2M	Total
Oct.	622	80	228	94	1,024
Nov.	606	230	248	34	1,118

TOLS004644

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

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Very little has since happened to affect our estimates and we do not see how, at this writing, that we can have all the block penta that we will need in November, much less October. We have already October orders booked for 200,000 lbs. of blocks; the plant is supposed to be working weekends during the month of October, but it still looks impossible!

PentaConc. - Here, the pendulum has swung in a different direction; as of the middle of last week, neither customer - Hood or Follen - wanted concentrate and Monsanto's 12,000 gallon storage tank should very nearly be full. If we solicit new business, we are certain not to have capacity to handle it all the time, but if we don't in situations such as now we will have trouble getting Monsanto to make product as we need it.

Solvents - The predicted 2¢ per gallon increase of low end point exempt mineral spirits is occurring; some suppliers, Sept. 1, and the balance by October 15.

At times in the past month we have momentarily taken all of Eastman's KB-3 stock, therefore we will begin to stock more than previously.

Our biggest supply problem seems to be in getting Kolineum from OMD.

Other Materials - No supply problems and minor cost changes.

### (III) Inventory

September purchases	Raw Materials	\$181,439
	Containers	10,567
	Resale Stock	29,033
		<u>\$221,039</u>
Raw material transferred to finished goods		\$197,452

TOLS004645

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

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### (IV) October Sales Forecast

	Lbs	\$	\$ Oct. 1975
FPD Plants - Penta	416,000	175,000	174,972
Customers - Penta	433,000	182,000	95,838
WTC Products	-	260,000	206,956
Total		\$617,000	\$477,766

### (V) Assistance Requirements

--Just the same old ones.

Customer penta sales & WTC product sales.

Sodium penta source.

Penta cosolvents.

-- plus, it's sounding every day as though the intensity of surveillance on penta and solvents is increasing so rapidly that it will take everyone working on the problems just to stay at the same level of preparedness.

### (VI) General Comments

Fire alarm systems problems were isolated and corrected finally.

Triangle Refinery has requested we vacate the Cotton Valley, LA premises; we alternately have proposed an increased fee based on mineral spirits we purchase from them. Reply is expected in a week.

Plant employees will begin the increased medical surveillance check-ups in early October.

Manufacturing kettles were diked and oilseparator and associated concrete ditching will be completed in October.

### (VII) Travel

September - none

October - None planned, anticipate routine meeting with Monsanto production staff, company Operation Improvement in St. Louis Oct. 18, 19, 26.

R. F. Simmons

TOLS004646

**September 16, 1976.**

**Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 97203**

**Dear Neil:**

Enclosed you will find updated formula sheets for the products you make for us. Due to changing weights of raw materials, I think you will find slight variations of raw materials from the formula sheets you are now using; please destroy the old sheets and begin to use the new ones. (Retain and use the Preprime Conc. and RTU sheets using Santolene C; the new Preprime Conc. and RTU formulas are made for use with a Nalco corrosion inhibitor.)

If there are any questions, please advise.

**Best regards,**

**R. F. Simmons,  
Operations Manager**

**RFS/pdc**

**TOLS004647**

**BZTO104(e)041468**

# KOPPERS

## Interoffice Correspondence

cc: T. A. Beatty  
 F. E. Boge  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. M. Montgomery  
 J. D. Palmer  
 D. F. Taylerson

To J. D. Hite  
 Location K-100E  
 Subject Monthly Report August 1976

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date August 31, 1976

### Wood Treating Chemicals

#### (1) Shipment Highlights - August Account Month

##### 1. Camden, New Jersey Warehouse

Van Horn Metz Co. Penta Wood Pres. Conc.	Conshohocken, PA 10 X 55 Gal.	1881
Edrich Lumber Co. Penta Wood Pres. Conc.	Baltimore, MD 6 X 55 Gal.	1441
<b>Balance of shipments:</b>		
Woodtax Preprime Conc.	3 X 55 Gal.	512
Woodtax Preprime RTU	4 X 55 Gal.	440
Woodtax 140 RTU	1 X 55 Gal.	96
Woodtax RTU	4 X 55 Gal.	440
Penta Wood Pres. Conc.	3 X 55 Gal.	660
Penta Wood Pres. RTU	1 X 55 Gal.	83

##### 2. Enfield, North Carolina Warehouse

L. R. Forman & Sons Lumbrella 15 Yellow	Elizabeth City, NC 16 X 53 Gal.	3222
Union Camp Corp. Lumbrella 33 Redwood S	Franklin, VA 162 X 3 Gal.	2940
Georgia Pacific Corp. Lumbrella 33 Redwood S Green End Spray 400	Whiteville, NC 5 X 55 Gal. 2 X 55 Gal.	1458 572 <u>2030</u>
Georgia Pacific Corp. Liquid Noxtane SSI Timbertreat 625	Muffresboro, NC 4 X 55 Gal. 2 X 55 Gal.	1254 608 <u>T862</u>

TOLS004648

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

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Date \_\_\_\_\_

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American Furn. Co. Super Noxtane	Martinsville, VA 40 X 50 Lbs.	1120
Georgia Pacific Corp. Lumbrella 33 Yellow S	Varneville, S.C. 5 X 55 Gal.	1458
<b>Balance of Shipments:</b>		
Liquid Noxtane SSI	8 X 55 Gal.	2684
Lumbrella 12 Red Brown	5 X 53 Gal.	994
Lumbrella 15 Redwood	5 X 53 Gal.	1304
Lumbrella 33 Redwood	27 X 3 Gal.	668
Super Noxtane	28 X 50 Lbs.	810
NTA-NA 3	1 X 50 Lbs.	35
Dowicide GST Beads]	5 X 100 Lbs.	435

### 3. Conley, Georgia Warehouse

Westvaco Devip Corp. Liquid Noxtane SSI	Summerville, S.C. 10 X 55 Gal.	3190
Georgia Pacific Corp. Lumbrella 33 Redwood S Green End Spray 400	Monticello, GA 8 X 55 Gal. 4 X 55 Gal.	2332 1144 <u>3476</u>
Tolleson Lumber Co. Liquid Noxtane SSI	Perry, GA 4 X 55 Gal.	1342
Georgia Pacific Corp. Lumbrella 33 Yellow S Green End Spray 400	Cross City, FL 135 X 3 Gal. 1 X 55 Gal.	2450 286 <u>2736</u>
T & T Lumber Co. Liquid Noxtane SSI	Douglas, GA 4 X 55 Gal.	1265
Chas. Ingram Lbr. Co. Lumbrella 33 Yellow	Florence, SC 54 X 3 Gal.	1223

TOLS004649

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

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### Balance of shipments:

Liquid Noxtane SSI	6 X 55 Gal.	1965
Penta Stain #509	2 X 55 Gal.	451
Green End Spray 400	2 X 55 Gal.	633
Penta Wood Pres. Conc.	6 X 5 Gal.	141

### 4. Newark, California Warehouse

Capitol Ind. Supply	Salem, OR	
Liquid Noxtane SSI	45 X 55 Gal.	11571
Red End Sealer	10 X 55 Gal.	1028
Clear End Sealer	5 X 55 Gal.	409
		<u>13008</u>

Snider Lumber Co.	Turlock, CA	
Liquid Noxtane SSI	40 X 55 Gal.	12000

Willamette Valley Co.	Eugene, OR	
Liquid Noxtane SSI	20 X 55 Gal.	5594

Reliable Hardware	Arcata, CA	
Liquid Noxtane SSI	34 X 55 Gal.	8742
Clear End Sealer	6 X 55 Gal.	491
Orange End Sealer	4 X 55 Gal.	393
		<u>9626</u>

Cascade Ind. Supply	Redding, CA	
Liquid Noxtane SSI	4 X 305 Gal.	5704
Liquid Noxtane SSI	10 X 55 Gal.	2571
Liquid Azide 200	6 X 55 Gal.	1795
Clear End Sealer	4 X 55 Gal.	327
		<u>10397</u>

Red Hill Chip Corp.	Conway, SC	
Liquid Azide 200	1 X 55 Gal.	402
(Shipped from another customer at Thomasville, NC)		

TOLS004650

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

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### 5. Cotton Valley, Louisiana Blender

Texas Container	Texarkana, TX	
Woodtox 140 RTU	5949 Gal.	4664

### 6. Portland, Oregon Blender

Gilsonite Corp.	Portland, OR	
Redy Coat Penta RTU	45 X 55 Gal.	1980
Redy Coat Penta Conc.	28 X 55 Gal.	3850
		5830

Clear Pine Molding	Prineville, OR	
Woodtox Preprime RTU	5015 Gal.	4564

Jeld Wen Corp.	Flagstaff, AZ	
Woodtox 140 RTU	10588 Gal.	10482

J. H. Baxter	Eugene, OR	
Anstrik Green	2 X 55 Gal.	363
Petroset II	7 X 460 Lbs.	2479
		2842

Brewer Chem. Corp.	Honolulu, HI	
Woodtox 140 Conc.	40 X 55 Gal.	5346

Cascade Ind. Supply	Klamath Falls, OR	
Woodtox Preprime RTU	80 X 55 Gal.	6171

Republic Powdered Metals	Stockton, CA	
Woodtox 140 T RTU	110 X 55 Gal.	8470

Sierra Pacific Ind.	Chico, CA	
Woodtox Preprime RTU	7031 Gals.	6328

Willard Products	Redwood City, CA.	
Timbertox 40 Conc.	3926 Gals.	9030

Balance of shipments:		
WR 340 Conc	6 X 408 Lbs.	.490
Woodtox 140T RTU	2 X 5 Gal.	18

TOLS004651

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
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Subject \_\_\_\_\_

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### 7. Saugat, Illinois Blender

#### Penta Wood Pres. Conc. Bulk

Hood Lbr. Co.	Hattiesburg, MS	3899 Gal.	7681
Fallen Wood Pres.	Jackson, MS	1752 Gal.	3364

### St. Louis, Missouri

#### WTC Products Major Shipments

##### Bulk Woodtox Preprime RTU

Northern Sash & Door	Hawkins, WI	8040 Gal.	7075
Crestline	Wausau, WI	11956 Gal.	10521
Marvin Windows	Warroad, MN	6040 Gal.	5315
Burton Enterprises	Cobleskill, NY	5595 Gal.	4924
Malta Mfg.	Malta, OH	5933 Gal.	5221
National Solvents	Medina, OH	4004 Gal.	3524
Sealrite Windows	Lincoln, BB	3989 Gal.	3510

##### Bulk Woodtox Preprime Conc

Wm. Barr & Co.	Memphis, TN	5508 Gal.	12393
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##### Bulk Woodtox 140 RTU

Milan Box	Milan, TN	5925 Gal.	5037
Bennett Box	Clinton, IA	4843 Gal.	4117
W. H. Lumber Co.	New Albany, IN	3903 Gal.	3323

##### Bulk Penta Wood Pres. Conc.

Universal Coop.	Napoleon, OH	3831 Gal.	9961
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TOLS004652

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

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Location \_\_\_\_\_

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Dept. of Game & Fish Penta Wood Pres. Conc.	Spearfish, SD 6 X 55 Gal.	1221
Amsco Div. Penta Wood Pres. Conc	Minneapolis, MN 30 X 55 Gal.	5940
Gibson Homans Penta Wood Pres. Conc.	Des Moines, IA 8 X 55 Gal.	1584
Canton Chemicals Penta Wood Pres. Conc.	Hazelwood, NC 10 X 55 Gal.	2090
Federal Chemical Co. Penta Stain Conc.	Indianapolis, IN 20 X 55 Gal.	4345
Asplundh Tree Poletox Poletox	Willow Grove, PA 15 X 380 Lbs. 6 X 60 Lbs.	3534 241 <u>3775</u>
Webb & Sons Inc. WR 340 Conc. Woodtox RTU	Sherburne, NY 45 X 408 Lbs. 20 X 5 Gal.	3448 165 <u>3613</u>
Turner Supply Super Noxtane Dowicide GST Timbertreat 625	Mobile, AL 100 X 50 Lbs. 190 X 1000Lbs. 1 X 55 Gal.	2430 13110 223 <u>15763</u>
<b>Koppers Plants</b>		
Liquid Noxtane SSI Timbertreat 625 WTC # 71 Floc. Agent Anstrik Blue Conc KLB Beam Sealer	3 X 55 Gal. 4 X 55 Gal. 1 X 515 Lbs. 8 X 5 Gal. 12 X 55 Gal.	1008 1120 469 1200 1188

TOLS004653

# KOPPERS

## Interoffice Correspondence

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### Balance of shipments:

Woodtox Preprime Conc.	5 X 55 Gal.	949
Woodtox Preprime RTU	12 X 55 Gal.	1210
Woodtox 152 RTU	6 X 55 Gal.	677
Woodtox 152 RTU	12 X 5 Gal.	149
Woodtox RTU	13 X 5 Gal.	186
Penta Wood Pres. Conc.	4 X 55 Gal.	836
Penta Wood Pres. Conc.	20 X 5 Gal.	422
Penta Wood Pres. Conc.	43 X 1 Gal.	192
Penta Wood Pres. RTU	3 X 55 Gal.	248
Timbertreat 625	2 X 30 Gal.	312
Timbertox D-5	1 X 55 Gal.	83
Liquid Noxtane SSI	1 X 55 Gal.	336
Petroset II	2 X 460 Lbs.	708
Lumbrella 15 Redwood	2 X 55 Gal.	472
Clear End Sealer	3 X 55 Gal.	479
Clear End Sealer	4 X 5 Gal.	69
Yellow End Sealer	2 X 55 Gal.	374
Red End Sealer	1 X 5 Gal.	19
KLB Beam Sealer	1 X 55 Gal.	107
Wood Seal Wax	1 X 40 Lb.	19
Tritox	5 X 60 Lbs.	198
WTC #71	2 X 515 Lbs.	937
WTC #74	1 X 460 Lbs.	368
Woodtreat AA	4 X 40 Lbs.	94
Woodtreat AA	9 Tubes	39
Penta Stains	26 X 5 Gal.	572
Kraft Poly Paper	1 Roll	9

TOLS004654

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

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Date \_\_\_\_\_

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### Penta Shipments (Lbs.) August Calendar Month

	1976	1975
FPD Plants	266,379	608,610
Customers	328,841	240,425
WTC	72,000	67,817
	<u>667,220</u>	<u>916,852</u>

### Invoicing for August Accounting Month

	1976 Aug.	YTD	1975 Aug.	YTD
FPD Plants Penta	171,533	1,298,847	231,950	1,313,547
Customer Penta	105,533	1,142,854	169,226	1,042,995
WTC Products	293,951	1,864,673	191,557	1,734,377
Total	<u>571,017</u>	<u>4,306,374</u>	<u>592,733</u>	<u>4,090,919</u>

### II. Raw Materials

Penta - With shipments off 300,000 Lbs. in August, penta inventory at Monsanto is running approximately 500,000 Lbs. There has been no date set yet for a week shutdown for needed repairs, but barring unforeseen problems and reasonable inventory position, it should be expected by the end of September.

Penta Conc. - From Monsanto - With the acquisition of a second customer, Follen Wood Pres., Monsanto is struggling to have product for shipment. The figures submitted by Monsanto of 150,000-180,000 Lbs. of product per month are not out of reach, but they sure aren't reaching those figures at this time; latest excuse was a personnel problem.

No other raw material supply problems, although there are predictions of short supply of isopropanol and acetone by year-end.

Pricing- Mineral spirits, particularly low end point exempt product, is increasing about 2¢/Gal. by most producers.

Monsanto contract penta shipments through August total 4,359,093 Lbs. - 4.6% above our quota to attain ten million Lbs.

TOLS004655

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

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### III. Inventory

August Purchases	Raw Materials	183,689
	Containers	12,495
	Resale Stock	25,522
		<u>221,706</u>
Transferred to finished goods		- 166,639

### IV. September Sales Forecast

	Lbs.	\$	Sept. '75 \$
FPD Plants Penta	320,000	134,400	120,504
Customer Penta	330,000	138,600	53,816
WTC Products		275,000	219,017

### V. Assistance Requirements

1. Continued sales emphasis on customer penta; if we gain a new customer, we have been losing an old one, so the net result is no change.
2. Sodium penta source. We have just had to purchase a second 30,000 Lbs from Dow without discount.

### VI. General Comments

During August we had two false fire alarms, as nearly as can be told due to fluctuating pressure and air bubbles from repair work on the city lines, not on our property. There is no way to trap out the air as it seeks the highest near point and we are spending a half day each week bleeding our lines to alleviate the situation.

The Phoenix blender, Rinchem, is making their first product shipment this week.

### VII. Travel

August - none

September - Vacation 1-3

R. F. Simmons

TOLS004656

cc: T. A. Beatty  
 F. E. Boga  
 J. F. Bridges  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. H. Montgomery  
 J. D. Palmer  
 D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report July 1976  
Wood Treating Chemicals

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date July 23, 1976

### (1) Shipment Highlights - July Accounting Month

#### 1. Camden, New Jersey Warehouse

Savogran Co.	Norwood, MA	
Woodtos S Conc	10 X 55 Gal.	1460
 Balance of shipments:		
Woodtox Preprime RTU	3 X 55 Gal.	330
Penta Wood Pres. Conc.	6 X 55 Gal.	1320

#### 2. Enfield, North Carolina Warehouse

Georgia Pacific Corp.	Ahoskie, N.C.	
Lumbrella 33 Redwood S	5 X 55 Gal.	1458
Green End Spray 400	2 X 55 Gal.	572
		<u>2030</u>
 Cands Lumber Co.	Elizabeth City, N.C.	
Lumbrella 15 Yellow	15 X 55 Gal.	3222
 Corbett Lumber	Wilmington, N.C.	
Liquid Noxtane SSI	10 X 55 Gal.	3377
 Potomac Supply Co.	Kinsdale, VA	
Liquid Noxtane SSI	4 X 55 Gal.	1208
 Coastal Lumber Co.	Weldon, N.C.	
Liquid Noxtane SSI	5 X 55 Gal.	1664
Timbertreat 625	1 X 55 Gal.	276
		<u>1940</u>
 Georgia Pacific Corp.	Enfield, N.C.	
Dowicide GST	19 X 100 Lbs.	1652
Timbertreat 625	1 X 55 Gal.	290
		<u>1942</u>

TOLS004657

# KOPPERS

## Interoffice Correspondence

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W. H. Sheffield Lumber Liquid Noxtane SSI	Suffolk, VA 3 X 55 Gal.	1007
Georgia Pacific Corp. Green End Spray 400 Lumbrella 33 Redwood S	Whiteville, N.C. 2 X 55 Gal. 2 X 55 Gal.	572 583 <u>1155</u>

### Balance of shipments:

Liquid Noxtane SSI	6 X 55 Gal.	2013
Timbertreat 625	3 X 55 Gal.	838
Lumbrella 33 Redwood	54 X 3 Gal.	1337
Super Noxtane	20 X 50 Lbs.	570
Dowicide GST	6 X 100 Lbs.	552
Lumbrella 15 Redwood	4 X 53 Gal.	869

### 3/ Conley, Georgia Warehouse

Georgia Pacific Corp. Lumbrella 33 Redwood Green End Spray 400	Monticello, GA 4 X 55 Gal. 4 X 55 Gal.	1166 1144 <u>2310</u>
--	--	-----------------------------

Tolleson Lumber Co. Liquid Noxtane SSI	Perry, GA 4 X 55 Gal.	1342
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Georgia Pacific Corp. Green End Spray 400 Lumbrella 33 Redwood	Prosperity, S.C. 4 X 55 Gal. 8 X 55 Gal.	1144 2332 <u>3476</u>
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Chas. Ingram Lumber Lumbrella 33 Yellow S	Florence, S.C. 54 X 3 Gal.	1223
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Cordele Sash & Door Liquid Noxtane SSI	Cordele, GA 5 X 55 Gal.	1609
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TOLS004658

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

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**Balance of shipments:**

Liquid Noxtane SSI	5 X 55 Gal.	1672
Green End Spray 400	1 X 55 Gal.	286
Lumbrella 33 Redwood	27 X 3 Gal.	490

**4. Newark, California Warehouse**

P.B.M. Supply	Chico, CA	
Liquid Azide 200	20 X 55 Gal.	5283
Pallets	17 Ea.	176
		<u>5459</u>

Capital Ind. Supply	Salem, OR	
Red End Sealer	12 X 55 Gal.	1234
Liquid Noxtane SSI	4 X 345 Gal.	6452
Liquid Noxtane SSI	38 X 55 Gal.	9771
		<u>17457</u>

Weyerhauser Co.	Everett, WA	
Liquid Noxtane SSI	20 X 55 Gal.	6050

Weyerhauser Co.	Longview, WA	
Liquid Noxtane SSI	20 X 55 Gal.	6050

Cascade Industrial	Klamath Falls, OR	
Liquid Noxtane SSI	4 X 345 Gal.	6452
Liquid Noxtane SSI	10 X 55 Gal.	2571
Liquid Azide 200	4 X 55 Gal.	1197
		<u>10220</u>

E. B. Yancy Lumber	Madera, CA	
Liquid Noxtane SSI	7 X 55 Gal.	2349
Liquid Azide 200	3 X 55 Gal.	1138
		<u>3487</u>

<b>Balance of shipments:</b>		
Red End Sealer	5 X 55 Gal.	619
Liquid Azide 200	2 X 55 Gal.	757

TOLS004659

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-4-

### 5. Cotton Valley, Louisiana Blender

Woodtax 140 RTU Bulk

Bennett Box Co.	Texarkana, TX	6118 Gal.	4797
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### 6. Portland, Oregon Blender

Jeld Wen Corp. Woodtax 140 RTU	Flagstaff, AZ 7031 Gal.	6961
Clear Pine Molding Woodtax Preprime RTU	Prineville, OR 5941 Gal.	5406
Sierra Pacific Ind. Woodtax Preprime RTU	Chico, CA 6919 Gal.	6227
Gilsonite Inc. Redy Coat Penta Conc. Redy Coat Penta RTU	Portland, OR 20 X 55 Gal. 20 X 55 Gal.	2750 880 <u>3630</u>
Cascade Ind. Supply Woodtax Preprime RTU	Klamath Falls, OR 44 X 55 Gal.	3394
Nikkai Corp. Woodtax 140 RTU	Sacramento, CA 20 X 55 Gal.	1535
Balance of shipments: Woodtax 140 RTU Woodtax 140 RTU	1031 Gal. 10 X 55 Gal.	876 853

TOLS004660

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-5-

### B. St. Louis, Missouri

#### WTC Products Major Shipments

##### Bulk Woodtox Preprime RTU

Marvin Windows	Warroad, MN	6068 Gal.	5340
Northern Sash & Door	Hawkins, WI	5129 Gal.	4514
Caradco Window	Dubuque, IA	5869 Gal.	5165
Crestline	Wausau, WI	5581 Gal.	4911
Malta Mfg. Co.	Malta, OH	5945 Gal.	5232
Knapheide Mfg. Co.	Quincy, IL		
Woodtox 15% RTU	3981 Gal.		5374
W-M Lumber Co.	New Albany, IN		
Woodtox 140 RTU	3927 Gal.		3338
Universal Coop.	Napoleon, OH		
Penta Wood Pres. Conc.	4540 Gal.		11804
Simonsen Chemical	Cabool, MO.		
Woodtox 140 RTU	3000 Gal.		2550
Gibson Homans	Kansas City, MO.		
Penta Wood Pres. Conc.	6 X 55 Gal.		1320
Union Camp Corp.	Folkston, GA		
Lumbrella 33 Yellow S	594 X 3 Gal.		10781
Union Camp. Corp.	Meldrim, GA		
Lumbrella 33 Yellow S	270 X 3 Gal.		4901
Georgia Pacific Corp.	Warrenton, GA		
Lumbrella 33 Yellow H	135 X 3 Gal.		2450
Savogran Co.	Addison, IL		
Woodtox S Conc.	10 X 55 Gal.		1460

TOLS004661

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Capitol Ind. Supply  
Timbertreat 625

Salem, OR  
5 X 55 Gal.

1114

Madison Wood Pres  
Woodtox 152 RTU  
Penta Wood Pres. Conc.  
Woodtox RTU  
Penta Wood Pres. Conc.  
Penta Stains

Madison, VA	
1 X 55 Gal.	105
1 X 55 Gal.	220
12 X 1 Gal.	36
12 X 1 Gal.	6060
	566
	<u>987</u>

Asplundh Tree Expert  
Poletox  
Poletox  
Penta Wood Pres. Conc.

Willow Grove, PA	
20 X 380 Lbs.	4712
100 X 60 Lbs.	4020
10 X 5 Gal.	225
	<u>8957</u>

New England Log Homes  
Woodtox RTU  
Woodtox 140 Conc.

Great Barrington, MA	
300 X 5 Gal.	3750
24 X 55 Gal.	3630
	<u>7380</u>

Weyerhauser Co.  
Liquid Noxtane SSI

Lewiston, N.C.	
56 X 55 Gal.	16940

Shipments to Koppers Plants  
WTC #7-11  
WTC #71  
WTC #74  
Liquid Noxtane SSI  
Timbertreat 625  
Anstrik Blue Conc.

6 X 39 Lbs.	187
8 X 515 Lbs.	3625
2 X 460 Lbs.	736
1 X 55 Gal.	336
1 X 55 Gal.	281
2 X 5 Gal.	300

Balance of shipments:  
Woodtox Preprime Conc.  
Woodtox Preprime RTU  
Woodtox Preprime Conc.  
Woodtox 140 Conc.  
Woodtox 140 RTU

8 X 55 Gal.	1477
10 X 55 Gal.	1100
2 X 5 Gal.	39
1 X 55 Gal.	171
2 X 55 Gal.	193

TOLS004662

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-6-

Woodtox RTU	6 X 55 Gal.	639
Woodtox RTU	11 X 5 Gal.	131
Penta Wood Pres. Conc.	5 X 55 Gal.	813
Penta Wood Pres. Conc.	1 X 5 Gal.	24
Penta Wood Pres. RTU	500 Gal.	320
Penta Wood Pres. RTU	5 X 55 Gal.	413
Liquid Noxtane SSI	2 X 55 Gal.	671
Timbertreat 625	1 X 55 Gal.	281
Timbertreat 625	1 X 5 Gal.	27
Dowicide GST	2 X 100 Lbs.	170
Super Noxtane	60 X 50 Lbs.	1520
Wood seal wax	2 X 40#Lbs.	37
Woodtreat AA	4 X 40 Lbs.	94
Penta Check	3 Qts.	33
Penta Stain		1022

### Penta shipments - July Calendar Month - Lbs.

	--1976--	--1975--
FPD Plants	612,653	438,325
Customers	320,796	435,855
WTC	<u>21,600</u>	<u>83,500</u>
Total	<u>955,049</u>	<u>957,680</u>

### July Accounting Month Invoicing

	1976 July	YTD	1975 July	YTD
FPD Plants Penta	196,855	1,127,314	106,233	1,081,597
Customers Penta	186,741	1,037,321	111,606	873,769
WTC Products	<u>241,003</u>	<u>1,570,722</u>	<u>236,138</u>	<u>1,342,820</u>
	<u>\$624,599</u>	<u>\$3,735,357</u>	<u>\$453,977</u>	<u>\$3,498,186</u>

### (II) Raw Materials

Except for Monsanto's penta plant continuing problems, no supply problems exist.

The pricing increase trend is noticed this month in pigments and dyes. Hercules and Texas Aniline increased 5-10¢ per pound; other pigment and dye manufacturers will probably follow this lead.

TOLS004663

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### -PENTA -

Since some makeshift patching on material supply lines and penta plant heat exchanger, the penta production has limped along at about 50% plant capacity rate. Monsanto had planned by working three shifts and all weekends to build up a half million pound product inventory so they could shut down for a week to install a new heat exchanger and piping. The exchanger was scheduled for delivery July 16; to date, it is not received and delivery has been pushed back two weeks. At the same time, it is requiring 12 to 14 hours to produce 30M pounds of product now whereas 36-40M formerly was produced in 8 hours. So the situation is that every bit of production is being shipped almost immediately as it's made, and frequently considerable order juggling occurs when demand exceeds production. We, nor Monsanto foresee now when shutdown and repairs can be accomplished. Whenever it does occur, we predict a very poor sales month for penta and several plants out of material for we don't think Monsanto has the current capacity to build inventory before a shutdown.

### Monsanto Contract Penta Shipments

April	1,491,511	35.6%	FPD, 60.1% Customers, 4.3% WTC
May	640,907	62.0%	" 32.5% " 5.5% "
June	605,970	39.3%	" 36.3% " 24.4% "
July anticipated	<u>955,049</u>	64.1%	" 33.6% " 2.3% "

3,693,437 Lbs. - 110.8% of quota

### (III) Inventory

July purchases	Raw material \$212,506
	Containers 9,471
	Resale stock 8,469
	<u>3230,446</u>

Transferred to finished goods \$210,046.

TOLS004664

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### (IV) August Profit Opportunities / Sales Forecast

	Lbs.	\$	Aug. '75 Comparison
FPD Penta	542,700	227,934	231,950
Customer Penta	280,600	117,850	169,226
WTC Products		225,000	191,557
		<u>\$570,784</u>	<u>\$592,733</u>

### (V) Assistance Requirements

1. Monsanto penta production- bags and blocks - continues in a deplorable situation, but I doubt if there's any immediate solution and if any amount of talking will help much.

2. In this space last month, we listed five prime candidates for loads of penta. In so far as we can tell, not one was contacted -- and none of them were sold. HELP!

3. Are we any further along on a sodium penta source? We are much shorter on inventory:

At Enfield -4,300 Lbs. Sodium Penta

7,450 Lbs. Super Noxtane

At St. Louis 0 Lbs. Sodium Penta

Drums 16,300 Super Noxtane

Bags 30,000 Super Noxtane (Due from blender)

19,000 Lb. Sodium penta customer order "on hold". We are stalling Dow on pickup of our order for 30,000 Lbs. of sodium penta @ .67 FOB Midland, without discount; they are tracing weekly and we are putting off will call weekly.

TOLS004665

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### (VI) General Comments

There were no shipments of Monsanto Penta Concentrate Solution during July accounting month; a shipment has gone to Hood-Hattiesburg July 21 and Fred Owen is optimistic about getting an order from Baldwin Pole & Piling, Bay Minette, AL soon.

Phoenix blender of Woodtox 140 RTU, Riachem Company, is expected to have product available for shipment by the end of July.

WTC Department's clean safety record went down the tube this month when Alex Saucedo got a shot of Liquid Azide in the right eye while working on a chemical metering pump at Covello, California. This is our first loss-time accident in eight years.

### (VII) Travel

July - None

August - None scheduled.

R. F. Simmons

TOLS004666

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Penta History

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date July 19, 1976

Confirming your telephone request this morning.

Selling Price History (T/L-C/L prices, F.O.B. Sauget, equalized.)  
 Corrected Pricing per conversation

7/1/70	\$ .17 Lb.	5/23/75	.38 Lb.
4/1/73	.19 Lb.	5/1/76	.42 Lb.
2/4/74	.25 Lb.		
3/15/74	.28 Lb.		
5/1/74	.31 Lb.		
6/5/74	.34 Lb.		
7/1/74	.42 Lb.		
5/10/75	.39 Lb.		

Penta Purchases - (Calendar Years)

	<u>1972</u>	<u>Lbs.</u>	<u>%</u>	<u>1973</u>	<u>Lbs.</u>	<u>%</u>
Koppers Plants	7,846,334	43.8		6,952,476	41.2	
Customers	8,220,482	45.9		8,355,228	49.5	
WTC	1,847,300	10.3		1,581,876	9.3	
Total (Monsanto)	<u>17,914,116</u>			<u>16,889,580</u>		
Vulcan	0			492,000(K)		
Reichhold	0			243,054 *		

\*Tetra-Penta for WTC Use

(K) Koppers Plants

	<u>1974</u>	<u>Lbs.</u>	<u>%</u>	<u>1975</u>	<u>Lbs.</u>	<u>%</u>	<u>1976 (Thru June)</u>	<u>Lbs.</u>	<u>%</u>
Koppers Plants	4,506,634	37.3		4,136,560	50.5		2,312,840	41.4	
Customers	5,860,007	46.3		3,227,361	39.4		2,417,540	46.2	
WTC	1,603,870	13.0		821,272	10.1		491,400	9.4	
Vulcan	0			0			0		
Reichhold	187,550*			458,990(K)			121,500*		
				161,800**					

TOLS004667

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Penta History

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date July 19, 1976

Confirming your telephone request this morning.

### Selling Price History (T/L-C/L prices, F.O.B. Saugat, equalized.)

7/1/70	\$ .17 Lb.
4/1/73	.19 Lb.
2/4/74	.25 Lb.
3/15/74	.28 Lb.
5/1/74	.31 Lb.
6/5/74	.34 Lb.
5/27/75	.38 Lb.
5/1/76	.42 Lb.

### Penta Purchases - (Calendar Years)

	<u>1972</u>	<u>Lbs.</u>	<u>%</u>	<u>1973</u>	<u>Lbs.</u>	<u>%</u>
Koppers Plants	7,846,334	43.8		6,952,476	41.2	
Customers	8,220,482	45.9		8,355,228	49.5	
WTC	1,847,300	10.3		1,581,376	9.3	
Total (Monsanto)	<u>17,914,116</u>			<u>16,889,580</u>		
Vulcan	0			492,000(K)		
Reichhold	0			243,054 *		

\* Tetra-Penta for WTC Use

(K) Koppers Plants

	<u>1974</u>	<u>Lbs.</u>	<u>%</u>	<u>1975</u>	<u>Lbs.</u>	<u>%</u>	<u>1976 (Thru June)</u>	<u>Lbs.</u>	<u>%</u>
Koppers Plants	4,586,634	37.8		4,136,560	50.5		2,310,840	44.4	
Customers	5,869,007	48.3		3,227,361	39.4		2,417,510	46.2	
WTC	1,625,270	13.9		821,272	10.1		491,400	9.4	
Vulcan	0			0			0		
Reichhold	187,550*			458,990(K)			121,500*		
				161,800**					

TOLS004668

# WATER

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### WTC Purchased Chlorine & Phenol Conversions

From late June 1974 thru January 1975, we purchased some chlorine and phenol to convert to penta. If we supplied the chlorine, Monsanto charged us .2331 per pound of penta for conversion; if we supplied the phenol, Monsanto charged us .183 per pound for conversion - at no time was a conversion made with both WTC supplied materials,(at least on the books). For this conversion:

$$\begin{aligned} .378 \text{ pound phenol} &= 1 \text{ pound penta} \\ 1.4 \text{ pound chlorine} &= 1 \text{ pound penta} \end{aligned}$$

#### Chlorine Purchased

360,000 Lbs.	6/74	Standard Chemical of Canada	150.00 ton delv.
1,320,000 Lbs.	8-12/74	Copechim America (shipped from Vicksburg, Miss.)	324.60 ton delv.
550,000 Lbs.	1/75	Copechim America	"
60,000 Lbs.	9/74	Trimont Chemical (shipped from Sarnia, B.C.)	215.30 ton delv.

#### Phenol Purchased

218,120 Lbs.	6-8/74	S.C.I. Industries (shipped from Chicago)	.66422/Lb.
249,380 Lbs.	9/-4	Davos Chemicals (shipped from Reichhold-Tuscaloosa)	.55/Lb.
126,240 Lbs.	9/74	Copechim America (shipped from Reichhold-Tuscaloosa)	.598/Lb.

We have no figures for verification, but to our recollection, posted prices F.O.B. works for chlorine was about \$125 to \$135 per ton and phenol about .35 to .40 per pound during the time of the purchases.

R. F. Simmons

TOLS004669

cc:T. A. Beatty  
 F. E. Boge  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. H. Montgomery  
 J. D. Palmer  
 D. F. Taylorson

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report June 1976

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date July 1, 1976

### Wood Treating Chemicals

#### (1) Shipment Highlights - June Accounting Month

##### 1. Camden, New Jersey Warehouse

Van Horn Metz Co.	Conshohocken, PA	
Penta Wood Pres. Conc.	11 X 55 Gal.	2069.10
 Balance of Shipments:		
Woodtox Preprime Conc.	2 X 55 Gal.	379.50
Woodtox Preprime RTU	1 X 55 Gal.	101.75
Woodtox RTU	2 X 55 Gal.	220.00
Woodtox 140 RTU	6 X 55 Gal.	577.50
Penta Wood Pres. Conc.	4 X 55 Gal.	380.00
Penta Stain #509	2 X 55 Gal.	412.50
Super Noxtane	10 X 50#	263.00

##### 2. Enfield, North Carolina Warehouse

W. H. Sheffield Lbr.	Suffolk, VA.	
Liquid Noxtane SSI	4 X 55 Gal.	1342.00
Lumbrella 15 Redwood	4 X 55 Gal.	869.20
 Coastal Bbr.		
Liquid Noxtane SSI	Kinston, N. C.	1331.00
 Coastal Lbr.		
Santobrite	Sellars, S.C.	1122.00
Dowicide GST Beads	17 X 100#	198.00
 Corbett Lbr. Co.		
Lumbrella 15 Yellow	Wilmington, N.C.	1164.41
 Whitewater, Inc.		
Timbertreat 625	Monterey, TN.	561.00
Super Noxtane	2 X 55 Gal.	510.00
	20 X 50#	<u>1071.00</u>

TOLS004670

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

**Georgia Pacific Corp.**  
Lumbrella 33 Redwood S  
Green End Spray 400

Dudley, N.C.  
5 X 55 Gal.  
1 X 55 Gal.

1457.50  
286.00  
1743.50

**Georgia Pacific Corp.**  
Lumbrella 33 Redwood S

Russellville, S. C.  
7 X 55 Gal.

2040.50

**Georgia Pacific Corp.**  
Dowicide GST Beads

Plymouth, N.C.  
20 X 100#

1638.60

**Georgia Pacific Corp.**  
Liquid Nootane SSI  
Lumbrella 33 Redwood

Whiteville, N.C.  
1 X 55 Gal.  
6 X 55 Gal.

360.00  
1944.50  
2304.50

**Kirkman Lbr.**  
Liquid Nootane SSI

Columbia, N.C.  
10 X 55 Gal.

3190.00

**Balance of Shipments:**

Lumbrella 15 Redwood  
Liquid Nootane SSI  
Timbertreat 625  
Santobrite  
Dowicide GST Beads  
Super Nootane

7 X 55 Gal.  
2 X 55 Gal.  
2 X 55 Gal.  
1 X 50 #  
6 X 100#  
41 X 50#

1576.75  
671.00  
561.00  
33.50  
413.52  
1117.50

**3. Conley, Georgia Warehouse**

**Georgia Pacific Corp.**  
Lumbrella 33 Redwood S  
Green End Spray 400

Monticello, GA.  
8 X 55 Gal.  
3 X 55 Gal.

2332.00  
850.00  
3180.00

**Georgia Pacific Corp.**  
Lumbrella 33 Redwood S

Russellville, S. C.  
54 X 3 Gal.

980.10

**Georgia Pacific Corp.**  
Lumbrella 33 Yellow S

Cross City, FL  
135 X 3 Gal.

2450.25

TOLS004671

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

St. Regis Paper	Waycross, GA	
Liquid Nootane SSI	10 X 55 Gal.	3190.00

### Balance of Shipments:

Timbertreat 625	3 X 55 Gal.	841.50
Liquid Nootane SSI	3 X 55 Gal.	953.04
Green End Spray 400	2 X 55 Gal.	572.00
Penta Wood Pres. Conc.	1 X 55 Gal.	220.00
Lumbrella 15 Yellow	4 X 55 Gal.	869.20
Lumbrella 33 Redwood S	27 X 3 Gal.	490.05
Lumbrella 33 Mellow S	27 X 3 Gal.	668.25

### 4. Newark, California Warehouse

Nikkai Corp.	Sacramento, CA	
Liquid Nootane SSI	32 X 55 Gal.	8707.60
Liquid Azide 200	8 X 55 Gal.	2609.75
		11317.35

E. B. Yancy Lbr.	Madera, CA	
Liquid Azide 200	1 X 55 Gal.	379.50
Liquid Nootane SSI	5 X 55 Gal.	1677.50
		2057.00

Snyder Lbr.	Turlock, CA	
Liquid Azide 200	10 X 55 Gal.	3320.00
Liquid Nootane SSI	30 X 55 Gal.	9075.00
		12395.00

Reliable Hardware	Arcata, CA	
Liquid Nootane SSI	1 X 345 Gal.	1612.88
Liquid Nootane SSI	26 X 55 Gal.	6689.25
Liquid Azide 200	2 X 55 Gal.	598.40
Clear End Sealer	4 X 55 Gal.	327.25
Blue End Sealer	2 X 55 Gal.	196.35
Orange End Sealer	2 X 55 Gal.	196.35
		9816.48

TOLS004672

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Cascade Industrial Hdw.	Redding, CA	
Liquid Noxane SST	4 X 35 Gal.	6451.50
Liquid Noxane SSI	11 X 35 Gal.	2828.38
Liquid Azide 200	6 X 35 Gal.	1793.20
Clear End Sealer	2 X 35 Gal	163.63
		<u>17238.71</u>
 Weyerhaeuser Co.	North Bend, OR	
Liquid Noxane SSI	4 X 35 Gal	8004.00
 Weyerhaeuser Co.	Raymond, WA	
Liquid Noxane SSI	20 X 35 Gal.	6050.00
 Weyerhaeuser Co.	Everett, WA	
Liquid Noxane SSI	20 X 35 Gal.	6050.00
 Weyerhaeuser Co.	Longview, WA	
Liquid Noxane SSI	20 X 35 Gal.	6050.00
 P.B.M. Supply	Chico, CA	
Liquid Noxane SSI	34 X 35 Gal.	8742.25
Liquid Azide 200	14 X 35 Gal.	4188.80
		<u>12931.05</u>

5. Cotton Valley, Louisiana Blender  
Woodtax 140 RTU Bulk

Texas Container Texarkana, TX 3393 Gal. 2660.11

6. Portland, Oregon Blender

Gilsonite Inc.	Portland, OR	
Rody Coat Paint Conc.	40 X 35 Gal	5060.00
Rody Coat Paint RTU	40 X 35 Gal.	1606.00
		<u>6666.00</u>
 Sierra Pacific Ind.	Chico, CA	
Woodtax Preprime RTU	6743 Gal.	6068.70

TOLS004673

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

**Great Western Chemical  
 Woodtax 140 RTU**

-5-  
 Seattle, WA  
 3000Gal. 2550.00

**Jasco Chem. Co.  
 Woodtax 140 Conc.**

Mt. View, CA  
 3016 Gal. 5278.00

**J. H. Baxter  
 Petrosset II**

Eugene, OR  
 6 X 460 # 2129.20

**Honolulu Wood Treating  
 WR 340 Conc.**

Honolulu, HI  
 30 X 408# 2203.20

**Clear Pine Moulding  
 Woodtax Preprime RTU**

Prineville, OR  
 5974 Gal. 3438.34

**Morris Lumber Co.  
 Timbertox 40 Conc.**

Grants Pass, OR  
 2 X 345 Gal. 2012.00

**Balance of shipments:**

**WR 340 Conc.**

12 X 408 # 881.28

**Timbertox 40 Conc.**

3 X 55 Gal. 536.26

**Petrosset II**

2 X 460 # 708.40

### 7. Saugat, IL Blender

**Hood Lumber Co.  
 Penta Wood Pres. Conc.**

Hattiesburg, MS  
 4395 Gal. 8658.15

### 8. St. Louis, Missouri

#### WTC Products Major Shipments

**Bulk Woodtax Preprime RTU**  
**Northern Sash & Door**  
**Crestline**  
**Malta Mfg.**  
**National Solvents**  
**Caredco Window**  
**Marvin Windows**  
**Weathershield**  
**Vetter Mfg.**

Hawkins, WI	8022 Gal.	6817.74
Wausau, WI	11572 Gal.	9846.10
Malta, OH	9990 Gal.	8797.20
Medina, OH	7985 Gal.	6547.76
Dubuque, IA	6009 Gal.	4927.38
Warroad, MN	6034 Gal.	4947.88
Medford, WI	4025 Gal.	3300.50
Stevens Point,	2489 Gal.	2040.98

TOLS004674

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Mr. Barr Woodtax Preprime Conc.	Memphis, TN 4004 Gal.	9009.00
Milan Box Co. Woodtax 140 RTU	Milan, TN 5935 Gal.	5044.75
Elco Mfg. Co. Woodtax Preprime Conc.	Sharpsburg, PA 3874 Gal.	8716.50
Gibson Hamans Penta Wood Pres. Conc.	Des Moines, IA 8 X 55 Gal.	1584.00
Universal Coop. Penta Wood Pres. Conc.	Napoleon, OH 50 X 55 Gal.	8525.00
Farmers Union Central Penta Wood Pres. Conc. Penta Wood Pres. Conc.	St. Paul, MN 23 X 5 Gal. 24 X 6 X 1 Gal.	425.00 583.20 <u>1008.20</u>
Lincoln Hill Logs Woodtax Preprime RTU Penta Wood Pres. Conc.	Cannelton, IN 25 X 55 Gal. 6 X 55 Gal.	2062.50 1254.00 <u>3316.50</u>
New England Log Homes Woodtax RTU Woodtax 140 Conc.	Great Barrington, MA 105 X 5 Gal. 14 X 55 Gal.	1175.00 2233.00 <u>3408.00</u>
Michelin Chemical WR 340 Conc.	Detroit, MI 20 X 405 #	1468.00
Mids Inc. Woodtax 152 Penta Wood Pres. RTU	Quincy, IL 20 X 55 Gal. 20 X 5 Gal.	2039.00 200.00 <u>2239.00</u>

TOLS004675

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

CRIP R.R.  
Timbertox D-5

Trenton, MO  
53 X 55 Gal.

2915.00

Kentucky Mine Supply  
Super Noxane  
Timbertreat 625  
Timbertreat 625

Harlan, KY  
440 X 50 #  
5 X 55 Gal.  
15 X 5 Gal.

9504.00  
1113.75  
445.50  
11063.25

Dixon Lumber Co.  
Super Noxane

Galax, VA  
80 X 50 #

2000.00

Red Lake Indian Mills  
Super Noxane

Roddy, MO  
40 X 50 #

1120.00

Lyon Smell  
Super Noxane

Little Valley, NY  
40 X 50 #

1120.00

Southern Wood Piedmont  
WTC #71

Wilmington, NC  
3 X 51#

1344.15

Asplundh Tree Expert  
Poletlife TF  
Penta Stain #502  
Penta Stain #506  
Penta Stain #507  
Dowel Pins

Willow Grove, PA  
50 X 50 #  
2 X 5 Gal.  
3 X 5 Gal.  
1 X 5 Gal.  
70 Lots

1275.00  
45.50  
68.25  
22.75  
105.00  
1316.50

Crown Chemicals  
Woodtox RTU  
Timbertreat 625  
Penta Stain #502  
Penta Stain #506  
Penta Stain #506

St. Louis, Mo.  
1 X 55 Gal.  
25 X 5 Gal.  
10 X 5 Gal.  
10 X 5 Gal.  
5X 4 X 1 Gal.

110.00  
618.75  
205.00  
184.50  
82.80  
1201.05

TOLS004676

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-8-

### Koppers Plants

Oroville, CA  
Anstrik Blue Conc.

6 X 5 Gal. 900.00

Electric Mills, MS  
Timberreat 625  
Liquid Noxane SSI

1 X 55 Gal. 280.50  
1 X 55 Gal. 335.50  
616.00

Monticello, MS  
Liquid Noxane SSI  
Timberreat 625

1 X 55 Gal. 335.50  
1 X 55 Gal. 280.50  
616.00

Bow Springs, MS  
Liquid Noxane SSI  
Timberreat 625

1 X 55 Gal. 335.50  
1 X 55 Gal. 280.50  
616.00

Walterboro, GA  
Liquid Noxane SSI

1 X 55 Gal. 335.50

Magnolia, AK  
KLB Beam Sealer

12 X 55 Gal. 1188.00

Morrisville, NC  
Kib Beam Sealer

8 X 55 Gal. 792.00

### Balance of shipments:

Woodtox Preprime Conc.  
Woodtox Preprime RTU  
Woodtox 140 Conc.  
Woodtox 140 RTU  
Woodtox 140 RTU  
Woodtox RTU  
Woodtox RTU  
Woodtox 152 RTU

3 X 55 Gal. 544.50  
7 X 55 Gal. 753.50  
2 X 55 Gal. 341.00  
1 X 55 Gal. 96.25  
20 X 5 Gal. 180.00  
5 X 55 Gal. 569.25  
23 X 5 Gal. 307.50  
3 X 55 Gal. 330.00

TOLS004677

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-9-

Penta Wood Pres. Conc.	14 X 55 Gal.	2926.00
Penta Wood Pres. Conc.	4 X 5 Gal.	94.00
Penta Wood Pres. RTU	3 X 55 Gal.	247.50
Timbertreat 625	7 X 55 Gal.	175.25
Timbertox D-3	2 X 5 Gal.	15.00
Liquid Noxtnae SSI	1 X 55 Gal.	318.73
Clear End Sealer	4 X 55 Gal.	630.00
Clear End Sealer	1 X 5 Gal.	17.25
Red End Sealer	1 X 55 Gal.	173.25
Red End Sealer	2 X 5 Gal.	37.00
KLB Beam Sealer	1 X 55 Gal.	107.25
WT 340 Conc.	11 X 40 #	897.50
WTC # 7A	2 X 51 #	957.50
Lumbrella 15 Redwood	4 X 51 Gal.	669.20
Lumbrella 33 Redwood S.	54 X 3 Gal.	1198.25
Super Noxtnae	60 X 50 #	1320.25
Tritox	25 X 60 #	810.00
WT AA	14 X 40 #	322.40
Woodtreat AA	99 Tubes	416.70
Penta Stain #502	32 X 5 Gal.	702.00
Penta Stain #503	4 X 5 Gal.	87.00
Penta Stain #506	1 X 55 Gal.	206.25
Penta Stain #506	2 X 5 Gal.	43.50
Penta Stain #507	1 X 55 Gal.	195.25
Penta Stain #508	1 X 55 Gal.	206.25
Penta Stain #508	1 X 5 Gal.	21.75

### Penta Shipments - June Calendar Month Lbs.

	1976	1975
FPO Plants	238,050	644,368
Customers	250,160	211,019
WTC	144,100	82,000
	<u>632,310</u>	<u>937,387</u>

### June Accounting Month Invoicing Penta

1976-June	YTD 1976	June 1975	YTD 1975
FPO Plants Penta	34,006	930,459	259,751
Customers Penta	85,371	850,580	102,928
WTC Products	308,310	1324,749	358,896
	<u>527,687</u>	<u>3,110,758</u>	<u>721,575</u>

TOLS004678

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-10-

### II. Raw Materials

As projected in last month's report most all refiners are announcing mineral spirits increases. St. Louis suppliers are announcing 1¢ per gallon increases on regular spirits, 2¢ per gallon on low end point material; Cotton Valley has posted a 3¢ per gallon increase; West Coast producers have not announced their increases yet, but they are imminently expected.

Recent steel increases major producers are raising steel drum prices an average of 75¢ per drum.

Lack of penta production at Monsanto's plant is now impacting sales effort. There is no penta inventory, two Koppers' plant orders for ship and very little hope of production before the July 4th holiday. During normal months, WTC (WTC office) would be making customer contact at this time of the month for July sales, but we are deferring our calls until the production resumes. If there is no production until after July 4, we may very well have to turn to Reichhold or Vulcan for material for some FPD plants; WTC St. Louis has enough penta to run until about July 8 or 9.

### III. Inventory

June raw material purchases	\$92,172
Containers	3,416
Resale Stock	9,703
	\$105,291

Raw material transfer to finished product \$119,375

Complete physical inventory as of June closing, \$564,238; this represents a 26% inventory reduction since June 1975.

### IV. July profit opportunities

Penta Sales	Lbs.	\$	(1975 Comparison)
FPD	772,800	324,576	106,233
Customers	482,000	202,440	111,606
WTC Products		300,000	236,138
		\$ 827,016	\$ 453,977

TOLS004679

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-11-

Customer penta for July involving as of this writing includes:

	Date	Amount Lbs.
International Paper - Wiggins	6/15	40360
Hoosier Wood	7/6	5000
Standard Chem. of Canada	6/22	23100
Eirod	6/28	23200
Shillenbarger	6/22	6300
WILLIS	7/1	25200
J. H. Baxter-Long Beach	6/25	81900
Crown-Zellerbach-Gulfport	6/29	40000
Walker Williams	7/12	42000
Colfax Creosoting	7/12	40000

### V. Assistance Requirements

1. Over half my time the past week has been spent trying to reschedule penta shipments to make the penta available to those with the greatest need; someone needs to impress Monsanto that their "feast to famine" tactics are totally unnecessary.

2. With some individuals pushing, we should be due penta orders in July from the following:

Atlantic Creosoting

Langdale

McCormick & Baxter

Crown-Zellerbach (Urania)

International Paper (Longview)

A special comment on Escambia; we have not had an order since April (they got 7 loads in April before the price increase). Yet Gene Kerr's comment to us in the past week was to the effect there is penta business to be "had". If the price was right. I'm guessing, but this indicates Reichhold & Chemical Specialties is selling them.

3. Penta block production capacity increase.

4. Continued penta solvent search.

TOLS004680

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-12-

Date \_\_\_\_\_

5. Decision on sodium peats. Do we take the 30M T/L from Dow on 7/15 at 67¢/lb. F.O.B. Midland, or do we run out of product for resale and material to make Super Nartene — and discontinue sale of both?

### VI. General Comments

Plant labor contract settled 6/23, approx. 6% increase - 35¢/hr. all classifications. Union represented by R. Stems, assistant business agent and F. Brock, shop steward; Tom Beatty in attendance.

### VII. Travel

June - None.

July - Anticipate two days North Carolina with O. Martin/J. Palmer revising and updating our chemical-pump manual.

R. F. Simmons

RFS/pdc

TOLS004681

June 14, 1976

Mr. Neil Gallagher  
Time Off Co.  
P. O. Box 03117  
St. John's Station  
Portland, OR 79203

Dear Neil:

Please arrange to forward to us in St. Louis a physical inventory of our stock at your location as of closing Friday, June 18, 1976. The inventory should be mailed also on the 18th along with any shipping documents/production records not previously mailed.

This is our annual physical inventory of record, so please make all effort to correctly count the stock.

Yours truly,

R. F. Simmons,  
Operations Manager

RFS/pdc

TOLS004682

BZTO104(e)041503

# KOPPERS

## Interoffice Correspondence

cc: I. A. Deutly  
 F. E. Boge  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. M. Montgomery  
 J. D. Palmer  
 R. B. Putman  
 D. F. Taylerson

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report May 1976  
Wood Treating Chemicals

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date June 2, 1976

### (1) Shipment Highlights - May Accounting Month

#### 1. Camden, New Jersey Warehouse

Van Horn & Metz Co. Penta Wood Pres. Conc.	Conshohocken, PA 10 X 55 Gal.	1881.00
Bruning Paint Co. Penta Wood Pres. Conc.	Baltimore, MD 5 X 55 Gal.	1100.00
W. W. Babcock Co. Penta Stain #509 Woodtox Preprime RTU	Bath, NY 3 X 55 Gal. 10 X 55 Gal.	618.75 907.50 <u>1526.25</u>

#### Balance of shipments:

Penta Wood Pres. Conc.	7 X 55 Gal.	1540.00
Woodtox RTU	3 X 55 Gal.	305.25
Woodtox 140 RTU	1 X 55 Gal.	96.25
Super Noxtane	10 X 50 Lb.	255.00

#### 2. Enfield, North Carolina Warehouse

Georgia Pacific Corp. Green End Spray 400 Lumbrella 33 Redwood Soft	Whiteville, N.C. 2 X 55 Gal. 5 X 55 Gal.	572.00 1663.75 <u>2235.75</u>
Vaughan-Basset Furniture Liquid Noxtane SSI	Galax, VA 5 X 55 Gal.	1677.50
Mitchell Lumber Co. Liquid Noxtane SSI	Spruce Pine, N.C. 3 X 55 Gal.	1006.50
Columbia Supply Co. Liquid Noxtane SSI Santobrite	Conway, S.C. 3 X 55 Gal. 4 X 100 Lbs.	905.85 268.00 <u>1173.85</u>

TOLS004683

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-2-

Union Camp Corp. Lumbrella 33 Redwood	Franklin, VA. 108 X 3 Gal.	1960.20
Georgia Pacific Corp. Liquid Noxtane SSI Timbertreat 625	Murfreesboro, N.C. 4 X 55 Gal. 2 X 55 Gal.	1254.33 514.75 <u>1769.08</u>
Chesterfield Lumber Co. Lumbrella 25 Cherry Tone	Darlington, S.C. 4 X 55 Gal.	1267.40
Continental Can Co. Lumbrella 15 Yellow	McKenny, VA. 6 X 53 Gal.	1091.50
Balance of Shipments Liquid Noxtane SSI Green End Spray 400 Lumbrella 33 Redwood Hard Lumbrella 15 Redwood Super Noxtane Santobrite	5 X 55 Gal. 1 X 55 Gal. 54 X 3 Gal. 6 X 53 Gal. 91 X 50 Lbs. 20 X 100 Lbs.	1677.50 286.00 1336.50 1340.90 2192.55 1359.20

### 3. Conley, Georgia Warehouse

Koppers Co. Liquid Noxtane SSI	Riceboro, GA. 4 X 55 Gal.	1342.00
Tolleson Lumber Co. Liquid Noxtane SSI	Perry, GA. 3 X 55 Gal.	1006.50
Georgia Pacific Corp. Green End Spray 400	Monticello, GA. 4 X 55 Gal.	1144.00
Georgia Pacific Corp. Lumbrella 33 Yellow Soft	Warrenton, GA. 135 X 3 Gal.	2450.25

TOLS004684

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location\_\_\_\_\_

Location\_\_\_\_\_

Subject\_\_\_\_\_

Date \_\_\_\_\_

-3-

Georgia Pacific Corp.  
Lumbrella 33 Yellow Soft  
Lumbrella 33 Redwood Soft  
Green End Spray 400

Prosperity, S.C.	
135 X 3 Gal.	2450.25
135 X 3 Gal.	2450.25
2 X 55 Gal.	572.00
	<u>5472.50</u>

Georgia Pacific Corp.  
Lumbrella 33 Redwood Soft

Russellville, S.C.	
81 X 3 Gal.	1470.15

Holly Hill Lumber  
Lumbrella 33 Yellow Soft

Walterboro, S.C.	
81 X 3 Gal.	1470.15

Georgia Pacific Corp.  
Lumbrella 33 Yellow Soft  
Green End Spray 400

Cross City, FL.	
135 X 3 Gal.	2450.25
1 X 55 Gal.	286.00
	<u>2736.25</u>

Little Suwannee Lumber  
Liquid Noxtane SSI

Homerville, GA.	
3 X 55 Gal.	1006.50

Union Camp Corp.  
Lumbrella 33 Yellow Soft

Meldrim, GA.	
135 X 3 Gal.	2531.33

Balance of shipments  
Liquid Noxtane SSI  
Lumbrella 33 Redwood Soft  
Woodtox Preprime Conc.

3 X 55 Gal.	948.75
27 X 3 Gal.	668.25
1 X 55 Gal.	181.50

### 4. Newark, California Warehouse

P.B.M. Supply & Mfg.  
Liquid Noxtane SSI  
Liquid Azide 200  
Pallets

Chico, CA	
43 X 55 Gal.	11056.38
1 X 55 Gal.	299.20
11 Ea.	114.40
	<u>11469.98</u>

Capitol Industrial Supply  
Liquid Noxtane SSI  
Red End Sealer

Salem, OR.	
54 X 55 Gal.	13884.75
6 X 55 Gal.	532.95
	<u>14417.70</u>

TOLS004685

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Note \_\_\_\_\_

-4-

Reliable Hardware Co.	Arcata, CA	
Liquid Azide	3 X 55 Gal.	897.60
Liquid Noxtane SSI	25 X 55 Gal.	6428.13
Liquid Noxtane SSI	2 X 345 Gal.	3225.75
Blue End Sealer	2 X 55 Gal.	172.98
Orange End Sealer	4 X 55 Gal.	345.95
Clear End Sealer	3 X 55 Gal.	231.41
Clear End Sealer	1 X 300 Gal.	420.75
		<u>11722.57</u>

Weyerhaeuser Co.	Raymond, WA.	
Liquid Noxtane SSI	6 X 55 Gal.	1815.00

Balance of shipments:

Red End Sealer	5 X 55 Gal.	523.13
Liquid Azide 200	2 X 55 Gal.	803.00

5. Cotton Valley, Louisiana Blender

Woodtox 140 RTU Bulk

F & M Corp.	Caney, KS.	5988 Gal.	4850.28
Bennett Box Co.	Texarkana, TX.	6019 Gal.	4718.90
Leggett Lumber Co.	Livingston, TX	6467 Gal.	5496.95

6. Portland, Oregon Blender

Cascade Industrial Supply	Redding, CA.	
Woodtox Preprime RTU	48 X 55 Gal.	3366.00
Gilsonite Inc.	Portland, OR.	
Redy Coat Penta RTU	10 X 55 Gal.	401.50
Redy Coat Penta Conc.	30 X 55 Gal.	3795.00
		<u>4196.50</u>

TOLS004686

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
 Location \_\_\_\_\_ Location \_\_\_\_\_  
 Subject \_\_\_\_\_ Date \_\_\_\_\_

-5-

Clear Pine Moulding Woodtox Preprime RTU	Prineville, OR. 20 X 55 Gal.	1815.00
Nikel Corp. Woodtox 140 RTU	Sacramento, CA. 22 X 55 Gal.	1687.95
Balance of shipments: WR-340 Conc Anstrik Sagebrush Green	9 X 408 Lbs. 1 X 55 Gal.	673.20 181.50

### Sauget, Illinois Blender

Hood Lumber Co. Penta Wood Pres. Conc.	Hattiesburg, MS 4243 Gals.	8358.71
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### St. Louis, Missouri

#### WTC Products Major Shipments

##### Bulk Woodtox Preprime RTU

Burton Enterprises	Cobleskill, NY	5677 Gals.	4655.14
Desoto Inc.	Elgin, IL	4988 Gals.	4090.16
Northern Sash & Door	Hawkins, WI	4038 Gals.	3311.16
Hurd Millwork	Medford, WI	5999 Gals.	4919.18
Crestline	Wausau, WI	6107 Gals.	5007.74
Rockdale Sash	Joliet, IL	4027 Gals.	3302.14
Wabash Inc.	Memphis, TN	4021 Gals.	3297.22
Malta Mfg. Co.	Malta, OH	4038 Gals.	3311.16
Caradco Window	Dubuque, IA	5976 Gals.	4900.32

Wm. Barr Co. Woodtox Preprime Conc.	Memphis, TN 5942 Gal.	11230.38
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J. R. Ginn Co. Woodtox 140 RTU	St. Louis, MO. 4047 Gal.	3439.95
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TOLS004687

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
 Location \_\_\_\_\_ Location \_\_\_\_\_  
 Subject \_\_\_\_\_ Date \_\_\_\_\_

-6-

New Idea Farm Equip. Woodtox 140 RTU	Coldwater, OH 3950 Gal.	3357.50
Lok-N-Logs Woodtox 140 Conc.	Sherburne, NY 12 X 55 Gal.	1914.00
Canton Chemical Penta Wood Pres. Conc.	Hazelwood, N.C. 10 X 55 Gal.	2090.00
Cap Rock Elec. Coop. Penta Wood Pres. Conc.	Stanton, TX 5 X 55 Gal.	1100.00
Farmers Union Central Penta Wood Pres. Conc. Penta Wood Pres. Conc.	St. Paul, MN 50 X 5 Gal. 40 X 6 X 1 Gal.	850.00 972.00 <u>1822.00</u>
Federal Chemical Penta Stain Base Conc. Woodtox Preprime Conc.	Indianapolis, Ind. 18 X 55 Gal. 20 X 55 Gal.	3811.50 3190.00 <u>7001.50</u>
G.S.A. Wood Pres. Linseed Oil Wood Pres. Linseed Oil	Kansas City, MO. 12 X 55 Gal. 156 X 5 Gal.	1386.00 1950.00 <u>3336.00</u>
Yawkey-Bissell Hardware Super Noxtane Super Noxtane	White Lake, WI 1020 X 50 Lbs. 150 X 100 Lbs.	22032.00 6480.00 <u>28512.00</u>
Middle Tennessee Lumber Super Noxtane Timbertreat 625	Nashville, TN 20 X 100 Lbs. 3 X 55 Gal.	1000.00 468.00 <u>1468.00</u>
Asplundh Tree Expert Poletox	Willow Grove, PA 80 X 380 Lbs.	15352.00

TOLS004688

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
 Location \_\_\_\_\_ Location \_\_\_\_\_  
 Subject \_\_\_\_\_ Date \_\_\_\_\_

-7-

Red Hill Chip Lumbrella 25 Cherry Tone	Conway, SC 50 X 55 Gal.	11412.50
Bell Lumber & Pole Petroset II	New Brighton, MN 6 X 461 Lbs.	2129.82
J. H. Baxter Blue Anstrik Conc.	Eugene, OR 16 X 5 Gal.	2400.00

### Balance of shipments:

#### Koppers Plants

Denver, CO Anstrik Sagebrush Green	2 X 55 Gal.	363.00
Anstrik Sagebrush Green	2 X 5 Gal.	33.00
		<u>396.00</u>
Florence, SC Anstrik Blue Conc.	2 X 5 Gal.	300.00
Orrville, OH Anstrik Blue Conc	4 X 5 Gal.	600.00
Penta Wood Pres. Conc.	2 X 5 Gal.	47.00
		<u>647.00</u>
Oroville, CA Anstrik Blue Conc.	4 X 5 Gal.	600.00
Grenada, MS WTC #71	2 X 515 Lbs.	896.10
N. Little Rock, AR WTC #74	1 X 460 Lbs.	368.00
Montgomery, AL WTC #74	1 X 18 Lbs.	14.40
Electric Mills, MS Timbertreat 625	1 X 55 Gal.	280.50
Liquid Noxtane SSI	1 X 55 Gal.	335.50
		<u>616.00</u>

TOLS004689

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-8-

Woodtox Preprime Conc.	4 X 55 Gal.	726.00
Woodtox Preprime RTU	5 X 55 Gal.	508.75
Woodtox RTU	4 X 5 Gal.	51.00
Woodtox 152 RTU	2 X 55 Gal.	220.00
Penta Wood Pres. Conc.	18 X 55 Gal.	3916.00
Penta Wood Pres. Conc.	4 X 5 Gal.	94.00
Penta Wood Pres. RTU	4 X 55 Gal.	330.00
WR 340 Conc.	10 X 408 Lbs.	734.40
Liquid Noxtane SSI	1 X 55 Gal.	335.50
Timbertreat 625	4 X 55 Gal.	1037.85
Lumbrella 33 Redwood Soft	54 X 3 Gal.	980.10
Super Noxtane	2 X 100 Lbs.	108.00
Super Noxtane	50 X 50 Lbs.	1198.50
Dowicide GST	2 X 100 Lbs.	134.00
Woodseal Wax	4 X 426 Lbs.	664.56
Woodseal Wax	2 X 40 Lbs.	37.60
B Wood Pres.	13 X 6 X 1 Gal	210.60
Woodtreat AA	90 Tubes	378.00
Penta Stain #501	2 X 5 Gal.	43.50
Penta Stain #501	1 Gal.	4.60
Penta Stain #502	1 X 55 Gal.	206.25
Penta Stain #502	10 X 5 Gal.	223.50
Penta Stain #506	6 X 5 Gal.	130.50
Penta Stain #507	6 X 5 Gal.	130.50
Penta Stain #508	2 X 5 Gal.	45.50
Penta Stain #509	2 X 55 Gal.	412.50
Dating Nails & Tags	5 lots	39.45

### Penta Shipments - May Calendar Month - Lbs.

	1976	1975
FPD Plants	397,447	117,951
Customers	208,460	349,271
WTC	35,000	104,292
	640,907	571,514

TOLS004690

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
Location \_\_\_\_\_ Location \_\_\_\_\_  
Subject \_\_\_\_\_ Date \_\_\_\_\_

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### Invoicing Totals

	May 1976	YTD 1976	May 1975	YTD 1975
Penta FPD	139,786	796,453	174,497	715,613
Customers	148,322	765,209	121,693	659,235
WTC Products	275,992	1,021,409	277,439	947,786
	564,100	2,583,071	573,629	2,322,634

### II. Raw Materials

We are frequently encountering short supply of low end point, exempt mineral spirits (for Woodtox Preprime). By maintaining several suppliers, production has not been curtailed. Be it noted that tight supply in the past has been a forecaster of price increase.

Announced steel increase is expected to raise drum prices .30 to .50 per drum about June 21.

#### Recent cost increases:

Penta .0254/Lb.  
Sodium Fluoride .04/Lb.  
Lithium Hydroxide .09/Lb.  
Chevron 400 .0723/Gal.  
Sodium Pentachlorophenate .067/Lb. (loss of discount)  
Petroset 11 .0558/Lb.

### III. Inventory

May raw material purchases	\$105,361
container	12,563
resale stock	12,677
	<u>\$130,601</u>

Raw material transferred to finished goods \$123,164.

TOLS004691

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

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Date \_\_\_\_\_

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### IV May Profit Opportunities

	Lbs	\$
Penta Sales		
FPD	550,000	231,000
Customers	280,000	117,600
WTC Products		275,000
		<u>623,600</u>

Customer Penta includes truckloads to:

Atlantic Creosoting	5/17
Vick Lumber	5/21
ACW-Winfield, La.	5/24
Crown Zellerbach	5/27
Walker-Williams	anticipated

### V. Assistance Requirements

1. More Sales - Monsanto Concentrate and WTC products.
2. Liquid noxtane pump equipment leases.
3. Penta block production capacity increase. No May or June problems due to price increase and prior stocking plus Florence month-long shutdown, but problems thereafter at current production rate.
4. Continuing penta solvent search.
5. Consideration and discussion of sodium pentachlorophenate/what to do about Dow's proposal.

### VI. General Comments

Metropolitan sewer district and elevator (city) inspections this month without a hitch.

5/10 - T. Beatty visited. Toured Monsanto's penta plant; discussed some products, materials and costs; reviewed proposed Arizona blender, Rinchem Chemical.

5/18 - Visited Rinchem Chemical @ Phoenix with T. Beatty and A. Saucedo; agreed on blending arrangement - hope to be in business by July 1.

TOLS004692

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

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Date \_\_\_\_\_

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5/28 - Mike Loewe (Monsanto salesman) brought John McPhillips. Had lunch and discussion, J. M. Montgomery and this writer. McPhillips is Gary Hamner's replacement.

5/27 Robt. Sleme, assistant business agent for the union, met briefly with our plant employees and later Sleme and shop steward Frank Brock verbally presented the union proposals; expiration date, July 1, on the contract for wages and health and welfare benefits. See our 5/28 letter for details.

### VII Travel

May 18th Phoenix, Arizona  
June - Open at this time.

R. F. Simmons

RFS/pdc

TOLS004693

# KOPPERS

## Interoffice Correspondence

Cc: T. A. Beatty J. M. Montgomery  
 F. E. Boge J. D. Palmer  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 R. B. Putman  
 D. F. Taylerson

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report April 1976

Date April 30, 1976

### Wood Treating Chemicals

#### I. Shipment Highlights - April Accounting Month

##### (1) Camden, New Jersey Warehouse

New England Log Homes	Great Barrington, MA	
Woodtox 140 Conc.	14 X 55 Gal.	2117.50
Savogran Co.	Norwood, MA	
Woodtox S	10 X 55 Gal.	1410.75
<u>Balance of Shipments</u>		
Penta Wood Pres. Conc.	1 X 55 Gal.	220.00
Woodtox 140 RTU	5 X 55 Gal.	481.25
Woodtox RTU	1 X 55 Gal.	101.75
Super Noxtane	30 X 50 Lb.	757.00

##### (2) Enfield, North Carolina Warehouse

Georgia Pacific Corp.	Russellville, S. C.	
Lumbrella 33 Redwood	81 X 3 Gal.	1470.15
Westvaco Corp.	Summerville, S. C.	
Lumbrella 25 Cherrytone	5 X 55 Gal.	1402.50
Liquid Noxtane SSI	10 X 55 Gal.	3190.00
Kirkham Lbr. Co.	Columbia, N. C.	
Liquid Noxtane SSI	5 X 55 Gal.	1677.50
Lumbrella 12 Red Brown	5 X 55 Gal.	993.75
		<u>2671.25</u>

TOLS004694

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

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### Balance of Shipments

Liquid Noxtane SSI	4 X 55 Gal.	1231.12
Super Noxtane	110 X 50 Lb.	2427.44
Santobrite	25 X 100 Lb.	1744.60
Lumbrella 33 Redwood Hard	27 X 3 Gal.	668.25
Lumbrella 33 Redwood Soft	27 X 3 Gal.	611.55
Lumbrella 25 Cherry Tone	1 X 55 Gal.	291.50
Lumbrella 15 Clear	1 X 55 Gal.	132.00

### (3) Conley, Georgia Warehouse

Alton Box Board	Whitehouse, FL	
Liquid Noxtane SSI	8 X 55 Gal.	2552.00
T & T Lumber Co.	Douglas, GA	
Lumbrella 33 Yellow Soft	81 X 3 Gal.	1640.25
Liquid Noxtane SSI	2 X 55 Gal.	632.50
		<u>2272.75</u>

Union Camp Corp.	Folkston, GA	
Lumbrella 33 Yellow Soft	162 X 3 Gal.	4009.50

### Balance of Shipments

Green End Spray 400	5 X 55 Gal.	1450.00
Liquid Noxtane SSI	3 X 55 Gal.	1006.50
Timbertreat 625	1 X 55 Gal.	280.50
Lumbrella 33 Yellow Soft	27 X 3 Gal.	490.05

### (4) Newark, California Warehouse

PSH Mill Supply	Chico, CA	
Liquid Noxtane SSI	44 X 55 Gal.	11313.50

TOLS004695

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

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Date \_\_\_\_\_

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Capitol Industrial Supply Clear End Sealer Red End Sealer	Salem, OR 5 X 55 Gal. 15 X 55 Gal.	427.76 1437.56 <u>1856.32</u>
Weyerhaeuser Co. Liquid Noxane SSI	Everett, WA 20 X 55 Gal.	6050.00
Snider Lumber Liquid Noxane SSI	Turlock, CA 40 X 55 Gal.	12430.00
E. B. Yancey Lumber Co. Liquid Noxane SSI Liquid Azide 200	Madera, CA 8 X 55 Gal. 2 X 55 Gal.	2684.00 759.00 <u>3443.00</u>
Cascade Industrial Supply Liquid Noxane SSI Liquid Noxane SSI	Redding, CA 4 X 345 Gal. 15 X 55 Gal.	6451.50 3856.88 <u>10308.38</u>
Vaughn Bassett Furn Liquid Azide 200	Galax, VA 3 X 55 Gal.	1138.50

### (5) Cotton Valley, Louisiana Blender

F & H Corp. Woodtox 140 RTU	Caney, KS 5981 Gal.	4844.61
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### (6) Portland, Oregon Blender

Gilsonite Inc. Redy Coat Penta RTU Redy Coat Penta Conc.	Portland, OR 35 X 55 Gal. 15 X 55 Gal.	1405.25 1897.50 <u>3302.75</u>
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Nikkel Corp. Woodtox 140 RTU	Sacramento, CA 20 X 55 Gal.	1386.00
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TOLS004696

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

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-4-

Sierra Pacific Ind. Woodtax Preprime RTU-T	Chico, CA 6946 Gal.	6251.40
Gunning Builders Woodtax 140-T-RTU	Spokane, WA 39 X 55 Gal.	1823.25
Potlatch Forest Inc. Woodtax 140-T-RTU	Lawiston, ID 7012 Gal.	5609.60
Reliable Hardware Woodtax Preprime T RTU	Arcata, CA 2996 Gal.	2561.58

### Balance of Shipments

Woodtax Preprime RTU	12 X 55 Gal.	660.00
Woodtax Preprime RTU	1000 Gal.	900.00
Mineral Spirits	157 Gal.	67.71
Woodtax 140 T RTU	10 X 55 Gal.	852.50

### (7) Saugat, Illinois Blender

Hood Lumber Co. Penta Wood Pres. Conc.	Hattiesburg, MS 4359 Gal.	8587.23
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### (8) St. Louis, Missouri

### WTC Products Major Shipments

#### Bulk Woodtax Preprime RTU

Crestline	Wausau, WI	10,016 Gal.	8213.12
Marvin Windows	Warroad, MN	12,286 Gal.	10074.52
De Soto Inc.	Elgin, IL	10,241 Gal.	8397.62
Malta Mfg. Co.	Malta, OH	10,097 Gal.	8279.54

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

(5)

Caradco Window	Dubuque, IA	6,063 Gal.	4971.66
Weathershield Mfg.	Medford, WI	4,038 Gal.	3311.16
Northern Sash	Hawkins, WI	4,087 Gal.	3351.34
Hurd Millwork	Medford, WI	4,025 Gal.	3300.50
Weyerhaeuser Co. SPS 30% Solution	Craig, OK 8121 Gal.		9420.36
Knapheide Mfg. Co. Woodtox 152 RTU	Quincy, IL 4013 Gal.		5216.90
Norton Mfg. Co. Timbertox D-5	Memphis, TN 5824 Gal.		3610.88
Beckmeyer Lbr. Penta Wood Pres. Conc.	Beckmeyer, IL 1100 Gal.		1980.00
Rays Auto Salvage Penta Wood Pres. Conc.	St. James, Mo. 10 X 55 Gal.		2090.00
Asplundh Tree Expert Poletox	Willow Grove, PA 411 X 60 Lbs.		12853.80
Ray Loeper Lbr. Super Noxtane	Tuscaloosa, AL 200 X 50 Lbs.		4900.00
J. W. Black Super Noxtane	Corning, AR 60 X 50 Lbs.		1500.00
Savogran Co. Woodtox S Conc.	Addison, IL 10 X 55 Gal.		1410.75

TOLS004698

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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Webb & Son  
WR 340 Conc.  
Liquid Noxane SSI  
Woodtax 140 RTU  
Woodtax 140 RTU

Sherburne, N. Y.		
30 X 408 Lbs.		2080.80
2 X 55 Gal.		605.00
1 X 55 Gal.		77.00
20 X 5 Gal.		160.00
		<u>2922.80</u>

### Balance of Shipments

#### Koppers Plants

Bay Springs, Ms Liquid Noxane SSI Timbertreat 625	1 X 55 Gal. 1 X 55 Gal.	335.50 280.50
Charleston, S. C. WTC #71	6 X 515 Lbs.	2688.30
Gainesville, FL WTC #71	1 X 515 Lbs.	468.65
Florence, S. C. Anstrid Blue Conc.	1 X 5 Gal.	300.00
Montgomery, Al WTC #71	2 X 515 Lbs.	937.30
Stonewall, Ms Liquid Noxane SSI	2 X 55 Gal.	671.00
Electric Mills, MS Liquid Noxane SSI Timbertreat 625	1 X 55 Gal. 1 X 55 Gal.	335.50 280.50
Memphis, TN Penta Stain #506	4 X 5 Gal.	91.00

TOLS004699

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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Woodtox 140 Conc.	4 X 55 Gal.	605.00
Woodtox Preprime Conc.	3 X 55 Gal.	544.50
Woodtox Preprime RTU	3 X 5 Gal.	38.25
Woodtox 140 RTU	14 X 55 Gal.	1347.50
Woodtox 152 RTU	2 X 55 Gal.	220.00
Woodtox RTU	3 X 5 Gal.	38.25
Penta Wood Pres. Conc.	14 X 55 Gal.	2931.00
Penta Wood Pres. Conc.	14 X 5 Gal.	319.00
Penta Wood Pres. RTU	4 X 55 Gal.	330.00
Timbertreat 625	5 X 55 Gal.	1402.50
Timbertreat 625	6 X 5 Gal.	156.00
Liquid Noxtane SSI	2 X 55 Gal.	637.45
Lumbrella 15 Redwood	3 X 53 Gal.	707.55
Super Noxtane	92 X 50 Lbs.	2329.00
B Wood Pres.	12 X 6 X 1 Gal.	194.40
WTC #71	3 X 515 Lbs.	1344.15
Clear End Sealer	2 X 55 Gal.	319.00
Clear End Sealer	2 X 5 Gal.	34.50
Red End Sealer	10 X 5 Gal.	175.00
Wood Seal Wax	5 X 40 Lbs.	92.00
KLB Beam Sealer	2 X 55 Gal.	215.50
Penta Stain #502	51 X 5 Gal.	1118.25
Penta Stain #502	14 X 4 X 1 Gal.	257.50
Penta Stain #506	2 X 5 Gal.	43.50
Penta Stain #508	20 X 5 Gal.	430.50
Penta Stain #508	3 X 4 X 1 Gal.	55.20
Penta Stain #509	6 X 55 Gal.	1237.50
Penta Check	2 Qts.	19.14

TOLS004700

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### Penta Shipments - April Calendar Month - Lbs.

FPD Plants	530,680
Customers	896,931
WTC	63,900
	<u>1,491,511</u>

### Invoicing Total - April Accounting Month - \$

	1976	1975
Penta FPD	212,451	149,710
Customers	264,973	97,870
WTC Products	235,906	184,462
	<u>713,330</u>	<u>432,042</u>

### II. Raw Materials

No supply problems.

Mineral spirits increase .01/Gal. May 1.

Considerable contact this month with prospective co-solvent suppliers, but no new candidate solvents.

### III. Inventory

Remained just about static.

April Raw Material purchases	\$115,641
Container	0
Resale	8,103
	<u>3123,744</u>

Raw material transfer to Finished Goods      \$125,092

Old Woodtox 140 RTU stock is now down to 6600 gallons; other distress stock unchanged.

TOLS004701

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### IV. May Profit Opportunities

Penta Sales	Lbs	\$	Anticipated Margin
FPD	405,000	170,000	13%
Customers	405,000	170,000	13%
WTC Products		300,000	22%

### V. Assistance Requirements

1. Sales. One illustration of help needed - Monsanto Conc., still only selling 1 T/L month; should be selling four. Competitive pricing.
2. Continuing co-solvent search.
3. Lumbrilla discussion - last month's report.
4. Liquid Noxtane pump equipment leases - \$3700 spent this month on pumps and repairs.
5. Penta block production desperately needs increasing. Three booked orders carried over to May; could probably have had others if we had been in any position to solicit business.
- \* 6. Selling prices many products must be reviewed and increased at once, not only in light of penta increase, but because of other raw material increases over many months that have had no resultant product increases.

### VI. General Comments

Had insurance and air pollution (City of St. Louis) inspections this month. No problems.

TOLS004702

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### Company Visitors

10th - Gordon Gilbert - Purchasing  
14th - John Hite & Tom Beatty  
23rd - Tom Beatty

### VII. Travel

April - None  
May - Open at this time.

R. F. Simmons

# KOPPERS

## Interoffice Correspondence

cc: D. F. Taylorson  
 F. E. Boge  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. M. Montgomery  
 J. D. Palmer  
 R. B. Putman

To J. D. Hito  
 Location K-1001  
 Subject Monthly Report March 1976  
Wood Treating Chemicals

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date April 1, 1976

### 1. Shipment Highlights - March Accounting Month

#### 1. Camden, New Jersey Warehouse

Van Horn & Metz Co. Penta Wood Pres. Conc.	Conshohocken, PA. 10 X 55 Gal.	1881.00
John Rudy & Son Penta Wood Pres. Conc.	Glen Gardner, N.J. 13 X 55 Gal.	2717.00
<u>Balance of Shipments.</u>		
Woodtox 140 RTU	5 X 55 Gal.	481.25
Woodtox Preprime Conc.	4 X 55 Gal.	726.00
Penta Stain #509	2 X 55 Gal.	412.50

#### 2. Enfield, North Carolina Warehouse

Holly Hill Lbr. Co. Lumbrella 33 Yellow H.	Walterboro, S.C. 216 X 3 Gal.	3920.40
Weatvaco Dev. Corp. Lumbrella 12 Red Brown	Summerville, S.C. 5 X 53 Gal.	993.75
Corbett Lbr. Co. Lumbrella 15 Yellow	Wilmington, N.C. 5 X 53 Gal.	1168.33
Coastal Lbr. Co. Liquid Noxtane SSI Timbertreat 625	Pantego, N.C. 5 X 55 Gal. 3 X 55 Gal.	1663.75 828.30 <u>2492.05</u>
Coastal Lbr. Co. Liquid Noxtane SSI Timbertreat 625	Waldon, N. C. 1 X 55 Gal. 2 X 55 Gal.	1331.00 552.20 <u>1883.20</u>
Coastal Lbr. Co. Santobrite	Sellers, S.C. 20 X 100 #	1320.00

TOLS004704

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

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Date \_\_\_\_\_

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Georgia Pacific Corp. Lumbrella 33 Redwood S.	Ahoskie, N.C. 135 X 3 Gal.	2450.25
Georgia Pacific Corp. End Spray 400 Green	Varnville, S. C. 4 X 55 Gal.	1144.00
Georgia Pacific Corp. Super Noxtane	Enfield, N.C. 18 X 50 #	503.73
Virginia Highland Furn. Super Noxtane	Atkins, VA. 40 X 50#	1000.00
Gennett Lbr. Co. Liquid Noxtane SSI Timbertreat 625	Marion, N.C. 6 X 55 Gal. 1 X 55 Gal.	2013.00 280.50 <u>2293.50</u>
Link Taylor Corp. Liquid Noxtane SSI	Lexington, N.C. 10 X 55 Gal.	3190.00
Parton Lbr. Co. Liquid Noxtane SSI	Rutherford, N.C. 5 X 55 Gal.	1677.50
P. W. Plumly Lbr. Corp Liquid Noxtane SSI	Winchester, VA. 3 X 55 Gal.	1006.50
Canton Hardwood Santobrite	Canton, N.C. 20 X 100#	1220.00
<u>Balance of Shipments</u>		
Lumbrella 15 Redwood	11 X 53 Gal.	2445.95
Penta Wood Pres. Conc.	2 X 55 Gal.	440.00
Liquid Noxtane SSI	5 X 55 Gal.	1509.40
Super Noxtane	10 X 50 #	255.00
NTA-NA3 Crystals	1 X 50 #	35.00

TOLS004705

BZTO104(e)041526

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

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### 3. Conley, Georgia Warehouse

Georgia Pacific Corp. Lumbrella 33 Yellow S	Cross City, FL. 135 X 3 Gal.	2450.25
Georgia Pacific Corp. End Spray 400 Green	Monticello, GA. 4 X 55 Gal.	1144.00
Georgia Pacific Corp. End Spray 400 Green	Prosperity, S.C. 2 X 55 Gal.	572.00
Tolleson Lbr. Co. Lumbrella 33 Redwood H Liquid Noxtane SSI	Perry, GA. 27 X 3 Gal. 4 X 55 Gal.	668.25 1342.00 <u>2010.25</u>
Gennett Lbr. Co. Liquid Noxtane SSI	Pickens, S.C. 3 X 55 Gal.	1006.50
<u>Balance of Shipments</u> Liquid Noxtane SSI Timbertreat 625	1 X 55 Gal. 1 X 55 Gal.	335.50 280.50

### 4. Newark, California Warehouse

Cascade Industrial Supply Liquid Noxtane SSI Liquid Noxtane SSI Red End Sealer Clear End Sealer	Klamath Falls, OR. 3 X 345 Gals. 24 X 55 Gal. 2 X 55 Gal. 1 X 55 Gal.	4838.63 6171.00 177.65 77.14 <u>11264.42</u>
E. B. Yancey Lbr. Liquid Noxtane SSI Liquid Azide 200	Madera, CA. 4 X 55 Gal. 1 X 55 Gal.	1342.00 379.50 <u>1721.50</u>
Weyerhaeuser Co. Liquid Noxtane SSI	Everett, WA. 20 X 55 Gal.	6215.00

TOLS004706

BZTO104(e)041527

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### Balance of Shipments

Red End Sealer	4 X 55 Gal.	435.60
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### 5. Cotton Valley, Louisiana Blender

#### Woodtox 140 RTU-Bulk

Bennett Box Co.	Texarkana, TX.	6000 Gal.	4704.00
Milan Box Co.	Milan, TN.	6199 Gal.	5269.15
Texas Container	Texarkana, TX	6012 Gal.	4713.41

### 6. Portland, Oregon Blender

Gilsonite Inc.	Portland, OR.	
Redy Coat Penta	20 X 55 Gal.	803.00
Sierra Pacific Ind.	Chico, CA	
Woodtox Preprime RTU	7048 Gal.	5990.80
J. H. Baxter	Eugene, OR.	
Petroset II	6-1/2 X 460#	2340.80

### Balance of Shipments

Woodtox 140 RTU	2 X 55 Gal.	173.25
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### 7. Sauget, Illinois Blender

Hood Lumber Co.	Hattiesburg, MS.	
Penta Wood Pres. Conc. Spec.	4198 Gal.	8270.06

### 8. St. Louis, Missouri

#### WTC Products Major Shipments

TOLS004707

Woodhill Chem. Sales	Cleveland, OH.	
Woodtox Preprime Conc.	4031 Gals.	8465.10

Wm. Barr Co.	Memphis, TN.	
Woodtox Preprime Conc.	7992 Gals.	15104.88

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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Rockdale Sash & Trim Woodtox Preprime RTU	Joliet, IL. 4063 Gals.	3331.66
Vetter Mfg. Co. Woodtox Preprime RTU	Stevens Point, WI 2496 Gals.	2046.72
Hurd Millwork Woodtox Preprime RTU	Medford, WI 4061 Gals.	3727.43
Caradco Window Woodtox Preprime RTU	Dubuque, IA. 12154 Gals.	9966.28
Northern Sash Woodtox Preprime RTU	Hawkins, WI. 8595 Gals.	7047.90
National Solvents Woodtox Preprime RTU	Medina, Ohio 6128 Gals	5024.96
Crestline Woodtox Preprime RTU	Wausau, WI. 4067 Gals.	3334.94
New Idea Farm Equip. Woodtox 140 RTU	Coldwater, OH. 4074 Gals.	3462.90
T S & F Creosoting Timbertox D-5	Cambria, IL. 5831 Gals.	3615.22
Monsanto Co. WK-60 Solvent	St. Louis, MO. 19230 #	1726.85
J. W. Jones Lbr. Co. Liquid Noxtane SSI Timbertreat 625 Lumbrella 15 Lt. Green Lumbrella 15 Redwood Lumbrella 15 Yellow	Elizabeth City, N.C. 31 X 55 Gal. 12 X 55 Gal. 2 X 53 Gal. 20 X 53 Gal. 32 X 53 Gal.	9377.50 2970.00 402.80 3710.00 5936.00 <hr/> 22396.30

TOLS004708

BZTO104(e)041529

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Turner Supply  
 Super Noxtane  
 Santobrite  
 Timbertreat 625  
 Liquid Noxtane SS1  
 Woodtox Preprime Conc.

Mobile, AL.		
340 X 50 #		7344.00
100 X 100#		5130.00
1 X 55 Gal.		222.75
3 X 55 Gal.		816.75
2 X 55 Gal.		287.10
		<u>13800.60</u>

Gibson Homans Co.  
 Penta Wood Pres. Conc.  
 Penta Wood Pres. Conc.

Des Moines, IA		
6 X 55 Gal.		1188.00
Cleveland, OH.		
2 X 55 Gal.		440.00

Ohio Dept. Nat. Resources  
 Penta Wood Pres. Conc.

Rockbridge, OH.		
9 X 55 Gal.		1683.00

G. S. Robins Co.  
 Dowicide GST Beads

St. Louis, MO.		
20 X 100#		1060.00

Farmers Union Central  
 Penta Wood Pres. Conc  
 Penta Wood Pres. Conc.

St. Paul, MN.		
60 X 5 Gal.		1410.00
50 X 6 X 1 Gal.		1020.00
		<u>2430.00</u>

New England Log Homes  
 Woodtox 140 Conc.  
 Woodtox RTU

Great Barrington, MA.		
14 X 55 Gal.		2117.50
20 X 5 Gal.		220.00
		<u>2337.50</u>

Capitol Ind. Supply  
 Timbertreat 625

Salem, OR.		
6 X 55 Gal.		1395.90

Frank Miller Lumber  
 Super Noxtane  
 Timbertreat 625

Union City, IN.		
40 X 50 #		1000.00
1 X 55 Gal.		280.50
		<u>1280.50</u>

Georgia Pacific Corp.  
 Lumbrella 33 Redwood S

Monticello, GA.		
8 X 55 Gal.		2332.00

Continental Can Co.  
 Lumbrella 33 Yellow H

Mc Kenny, VA.		
54 X 3 Gal.		1223.10

TOLS004709

BZTO104(e)041530

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### Balance of Shipments

#### Koppers Plants

Magnolia, AR.	KLB Beam Sealer	24 X 55 Gals.	2376.00
Morrisville, N.C.	KLB Beam Sealer	8 X 55 Gals.	792.00
Oroville, CA.	WTC #71	6 X 515 #	2688.30
Georgetown, MS.	Liquid Noxtane SSI	1 X 55 Gals.	335.50
	Timbertreat 625	1 X 55 Gals.	280.50
Monticello, MS.	Liquid Noxtane SSI	1 X 55 Gals.	335.50
	Timbertreat 625	1 X 55 Gals.	280.50
Electric Mills, MS	Liquid Noxtane SSI	1 X 55 Gals.	335.50
	Timbertreat 625	1 X 55 Gals.	280.50
Charleston, S.C.	WTC #7-11	6 X 40 #	192.00
Woodtox Preprime Conc.		5 X 55 Gals.	866.25
Woodtox Preprime Conc.		1 X 5 Gals.	18.25
Woodtox Preprime RTU		21 X 55 Gals.	2026.75
Woodtox 140 RTU		2 X 55 Gals.	192.50
Woodtox 152 RTU		3 X 55 Gals.	330.00
Woodtox RTU		1 X 5 Gal.	12.75
Wood Pres. Linseed Oil		54 X 5 Gal.	675.00
Penta Wood Pres. Conc.		8 X 55 Gals.	1595.00
Penta Wood Pres. Conc.		25 X 5 Gal.	572.50
Penta Wood Pres. RTU		6 X 55 Gals.	495.00
WR 340 Conc.		8 X 408 #	528.77
Liquid Noxtane SSI		1 X 55 Gal.	335.50
Timbertreat 625		4 X 55 Gals.	1122.00
WTC #71		2 X 515 #	937.30
Green End Sealer		1 X 55 Gal.	197.08
Green End Sealer		3 X 5 Gal.	55.50
KLB Beam Sealer		1 X 55 Gal.	107.25
Special Solvent Mix		728 Gals.	873.60
Penta Stain #502		6 X 5 Gal.	135.50
Penta Stain #504		3 X 55 Gal.	618.75
Penta Stain #506		15 X 5 Gal.	487.50
Penta Stain #509		5 X 55 Gal.	1031.25
Polelife TF		10 X 50 #	255.00
B Wood Pres.		12 X 5 Gal.	105.00
B Wood Pres.		10 X 6 X 1 Gal.	62.00
Woodtreat AA		40 X 40 #	912.00
Poly Kraft Paper	TOLS004710	5 rolls	41.25

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
Location \_\_\_\_\_ Location \_\_\_\_\_  
Subject \_\_\_\_\_ Date \_\_\_\_\_

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### Penta Shipments - March Calendar Month - Lbs.

FPD Plants	494,863
Customers	546,744
WTC	48,150

### Invoicing - March Accounting Month - \$

	1976	1975
Penta FPD Plants	131,413	16,758
Customers	189,048	125,737
Sub-total	320,461	142,474
WTC Products	240,423	149,140
Grand Total	560,884	291,614

### II. Raw Materials

No supply problems. No material cost increases during the month except those brought about by the 7% rail freight increase effective 3/21/76 on material priced F.O.B. supplier plant.

### III. Inventory

Closing inventory evaluation total for all WTC locations: (\$)

	3/20/76	12/20/75	6/20/75
Raw Materials	295,975	346,295	359,791
Containers	20,214	13,760	20,426
Finished Products	377,986	432,115	380,597
	694,175	792,170	760,814

March Purchases - Raw Material \$82,055

Containers 11,609

WTC (Resale) Finished Goods 20,485

\$115,049

TOLS004711

Raw Material transferred to Finished Goods \$125,092

Distress Woodtox 140 stock is now 14,000 gallons; all other distress stock unchanged.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### IV. Profit Opportunities

Penta - with Reichhold announcement of 4¢/Lb. increase May 1, we expect another million pound month for April.

	Lbs.	\$
FPD Plants	550,000	209,000
Customers	636,000	241,700
	<u>1,186,000</u>	<u>450,700</u>

WTC Products \$225,000

This estimate reflects a \$50,000 curtailment due to what we think will be hit-or-miss truck strike situation during the month. We expect good sales on Woodtox Preprime RTU and Liquid Noxtane; spotty Lumbrella sales; carload orders of Woodtox 152, Woodtox Preprime Conc., and Penta Wood Preservative Conc., SPS-30 Solution and maybe two truckloads of Monsanto Penta Conc.

We have the potential to ship a truckload of Monsanto Penta Conc. per week - Sales Needed!

### V. Assistance Requirements

1. Sales. Due to slow business conditions one plant and one office employee were released March 15. Help!!
2. Decision about continuing Camden warehouse in answer to my 2/23/76 review.
3. Continued search for less expensive, better co-solvents.
4. Consolidation of Lumbrella formulas. For the amount of sales we have, we have entirely too many product dilutions, collors and hard water vs. soft water formulas to stock and economically afford the product line in its present state.
5. Completion of the equipment lease program for liquid noxtane pumps to cut out repair costs for units not being properly customer maintained.
6. We foresee Monsanto not maintaining adequate penta block supply and have over the past month had a lot of discussion with Monsanto about this without much change in status. Joe Montgomery is now also writing Monsanto. Other assistance may be helpful.

TOLS004712

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-10-

### VI. General Comments

Other March expenditures not shown under III.

Tank Car Leasing \$1285 - figure high as a result of little Feb. mileage credit.

Office supplies	532
Traffic Service	175
Label print supplies	35
Plant supplies	952
Safety expense	984
Utilities/services	982
Laboratory supplies	1398
Outside warehouse	1358 (Whse. & Rent)
Liq. Noxtane pumps	692

### Notable Visitors

March 3 - H. E. Crawford (Pittsburgh Credit) Transfer credit service to Pittsburgh responsibility.

March 8 - P. Goydan (Pittsburgh) J. Ignor- Missouri Dept. of Natural Resources - Waste Disposal Survey.

March 23 - M. Loewe, D. Parkey - Monsanto penta situation/problem discussion.

March 26 - P. Goydan, T. Marr (Pittsburgh) Rainwater runoff/plant drain/pollution control

### VII. Travel

March - None

April - Open at this time.

R. F. Simmons

TOLS004713

RFS/pdc

BZTO104(e)041534

cc: W. Alt  
J. M. Montgomery  
J. D. Palmer  
A. R. Saucedo  
G. B. Mills

March 1, 1976

Mr. Neil Gallagher  
Time Oil Company  
P. O. Box 03117, St. John's Station  
Portland, Oregon 79203

Dear Neil:

Attached is a blanket purchase order to Ashland Chemical Co. for a faster drying mineral spirits; loads are to be on your release only.

Begin at once to use this mineral spirits only for the following products:

Woodtox Preprime RTU - T  
Woodtox Preprime Conc. - T

You should maintain one T/L of this mineral spirits in inventory and one T/L of Woodtox Preprime RTU - T in inventory. We will continue to make Preprime Conc - T only when we have orders in hand and remaining drums from the last previous batch are depleted.

Best Regards,

R. F. Simmons  
Operations Manager

RFS/sjk

Attachment

Blind to Copyees: This raw material conforms to pollution requirements : 2% aromatics, distillation range: 312 - 364°F with 90% @ 350° and with a TCC flash-point of 101°F.

TOLS004714

BZTO104(e)041535

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. M. Montgomery  
 R. B. Putman  
 D. F. Taylor

To J. D. Hite

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report February  
Wood Treating Chemicals

Date February 24, 1976

### I. Shipment Highlights - February Accounting Month

1.	<u>Camden, New Jersey Warehouse</u>		
	Woodtox 140 R TU	1 X 55 Gal.	96.25
2.	<u>Enfield, North Carolina Warehouse</u>		
	Holly Hill Lumber Co. Lumbrella 33 Yellow H	Walterboro, South Carolina 135 X 3 Gal.	2,450.25
	<u>Balance of Shipments</u>		
	Lumbrella 33 Redwood H	54 X 3 Gal.	1,336.50
	Lumbrella 12 Red Brown	3 X 53 Gal.	643.95
	Lumbrella 15 Yellow	1 X 53 Gal.	235.85
	Lumbrella 15 Redwood	2 X 53 Gal.	471.70
	Santobrite	1 X 100 Lbs.	67.00
3.	<u>Conley, Georgia Warehouse</u>		
	Union Camp Corp. Lumbrella 33 Yellow H	Meldrim, Georgia 108 X 3 Gal.	1,960.20
	Georgia Pacific Corp. Lumbrella 33 Yellow H	Warrenton, Georgia 166 X 3 Gal.	3,012.90
	Alton Box Board Company Liquid Noxtane SS 1	Whitehouse, Florida 8 X 55 Gal.	2,552.00
	Georgia Pacific Corp. Green End Spray 400	Monticello, Georgia 4 X 55 Gal.	1,143.98
	Little Suwanne Lumber Co. Liquid Noxtane SS 1	Homerville, Georgia 3 X 55 Gal.	1,006.50

TOLS004715

# KOPPERS

## Inter-office Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 24, 1976

Page 2

### Balance of Shipments

Liquid Noxtane SS1	1 X 55 Gal.	318.73
Green End Spray 400	1 X 55 Gal.	296.81

### 4. Newark, California Warehouse

Snider Lumber	Turlock, California	
Liquid Noxtane SS1	24 X 55 Gal.	7,975.00
Liquid Azide 200	5 X 55 Gal.	<u>1,828.75</u>
		9,803.75

P. B. M. Supply	Chico, California	
Liquid Noxtane SS1	44 X 55 Gal.	11,313.50

Capitol Industrial Supply	Salem, Oregon	
Liquid Noxtane SS1	54 X 55 Gal.	13,884.75
Clear End Sealer	6 X 55 Gal.	<u>462.83</u>
		14,347.58

Reliable Hardware	Arcata, California	
Liquid Azide 200	4 X 55 Gal.	1,196.80
Liquid Noxtane SS1	2 X 345 Gal.	3,225.75
Liquid Noxtane SS1	18 X 55 Gal.	4,628.25
Clear End Sealer	2 X 345 Gal.	967.73
Blue End Sealer	3 X 55 Gal.	<u>259.46</u>
		10,277.99

### 5. Cotton Valley, Louisiana Blender

Woodtox 140 R T U - Bulk

Milan Box Company	Milan, Tenn	6025 Gal.	5,121.25
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TOLS004716

BZTO104(e)041537

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 24, 1976

Page 3

### 6. Portland, Oregon Blender

Beaver Lumber Co.  
Woodtox 140 R T U

Santa Clara, California  
2042 Gal.

1,735.70

Cascade Industrial Co.  
Woodtox PrePrime R T U  
Shell Sol

Anderson, California  
1070 Gal.  
430 Gal.

963.00  
185.46  
1,148.46

### Balance of Shipments

Redy Coat Penta R T U  
Woodtox PrePrime RTU  
WR 340 Conc.  
Woodtox 140 RTU-T

20 X 55 Gal.	<u>803.00</u>
2 X 55 Gal.	<u>183.15</u>
6 X 408 Lbs.	<u>440.64</u>
2 X 5 Gal.	<u>.30.18</u>

### 7. Saugeet, Illinois Blender

Hood Lumber Co.  
Penta Wood Pres. Conc. Spec

Hattiesburg, Mississippi  
4213 Gal.

8,299.61

### 8. St. Louis, Missouri

#### W T C Products - Major Shipments

Wm. Barr and Company  
Woodtox PrePrime Conc.

Memphis, Tennessee  
4047 Gal.

8,498.70

Crestline  
Woodtox PrePrime RTU

Wausau, Wisconsin  
6189 Gal.

5,074.98

Malta Mfg. Co.  
Woodtox PrePrime RTU

Malta, Ohio  
6050 Gal.

4,961.00

De Soto, Inc.  
Woodtox PrePrime RTU

Elgin, Illinois  
4896 Gal.

4,014.72

TOLS004717

BZTO104(e)041538

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 24, 1976

Page 4

### St. Louis, Missouri Continued

Weathershield Woodtox PrePrime RTU	Medford, Wisconsin 4081 Gal.	3,346.42
Marvin Windows Woodtox PrePrime RTU	Warroad, Min 6044 Gal.	4,956.08
Caradco Window Woodtox PrePrime RTU	Dubuque, Iowa 5420 Gal.	4,444.40
Hurd Millwork Woodtox PrePrime RTU	Medford, Wisconsin 4067 Gal.	3,334.94
Simonsen Chemical Woodtox 140 RTU	Cabool, Missouri 1500 Gal.	1,275.00
Federal Chemical Woodtox PrePrime Conc.	Indianapolis, Indiana 20 X 55 Gal.	3,190.00
Chem-Trix Corp. Penta Wood Pres. Conc.	Houston, Texas 5 X 55 Gal.	1,100.00
E T C Chemical Lumbrella 33 Yellow S Green End Spray 400	Hattiesburg, Mississippi 135 X 3 Gal. 3 X 55 Gal.	2,205.23 <u>735.08</u> <u>2,940.31</u>
Asplundh Tree Expert Poletox	Willow Grove, PA 39 X 380 Lbs.	7,716.40

TOLS004718

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 24, 1976

Page 5

### Balance of Shipments

Woodtox PrePrime Conc.	2 X 55 Gal.	363.00
Woodtox 152 RTU	1 X 55 Gal.	.110.00
Woodtox RTU	2 X 5 Gal.	25.50
Woodset 310 Conc.	2 X 55 Gal.	462.00
Penta Wood Pres. Conc.	4 X 55 Gal.	880.00
Lumbrella 33 Yellow S	54 X 3 Gal.	980.10
W T C # 74	1 X 460 Lbs.	368.00
Wood Seal Wax	1 X 426 Lbs.	166.14
Woodtreat AA	10 X 40 Lbs.	228.00
Anstrik Blue Conc.	2 X 5 Gal.	300.00
Penta Stain 501	5 X 5 Gal.	102.50
Penta Stain 502	4 X 55 Gal.	825.00
Penta Stain 503	5 X 5 Gal.	102.50
Penta Stain 503	5 X 4 X 1 Gal.	92.00
Penta Stain 505	5 X 5 Gal.	102.50
Penta Stain 508	5 X 4 X 1 Gal.	92.00
Penta Stain 509	1 X 55 Gal.	206.25

### Penta Shipments - February Calendar Month (LBS)

F P D Plants	340,060
Customers	211,542
W T C	<u>31,700</u>
	583,302

Invoicing - February Accounting Month (\$)	<u>1976</u>	<u>1975</u>
Penta - FPD Plants	163,210	67,630
Customers	100,354	72,978
Sub-Total	263,564	140,608
WTC Products	139,335	181,063
Grand Total	402,899	321,671

TOLS004719

# KOPPERS

## Inte office Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 24, 1976

Page 6

### II. Raw Materials

No problem in purchasing needed materials. Locally in St. Louis, one of the only two suppliers of low end point, Rule 66, mineral spirits is out of material for ten days but this does not endanger our supply.

#### Cost Changes:

Santolene	up	.003/Lb. (Woodtox)
Hampene 100	up	.025/Lb. (Lumbrella)
Harshaw Pigments		
Red Oxide	up	.07 /Lb. (Lumbrella)
Black	up	.02 /Lb. (Lumbrella)
Cal-Ink Pigments		
Green	down	.33/Lb. (Lumbrella)
Orange	down	.53/Lb. (Lumbrella)
Blue	down	.30/Lb. (Lumbrella)
T. Red	down	.12/Lb. (Lumbrella)
GPD Raw Umber	up	.03/Lb. =(Penta Stain)
GPD Burnt Sienna	up	.04/Lb. (Penta Stain)
Paraffin Wax	up	.0167/Lb. (Woodtoxes, Lumbrellas) (Beam Sealer KB)
WTL Base Oil	up	.051/Gal. (Timbertox 40 Cont.)

### III. Inventory

The \$50,000 difference between WTC card inventory and Pittsburgh Accounting has not been reconciled; at March closing, another complete physical inventory will be costed hoping it may aid in finding the difference.

During February, purchases of raw materials and containers totalled \$16,436 and \$57,741 was transferred from raw materials to finished product. The computer figure for cost of sales for the month will not be out until the end of March, but judging from past months performances, we should have relieved \$85,000 in inventory through sales.

TOLS004720

BZTO104(e)041541

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 24, 1976

Page 7

Of the slow-moving or distress stock listed in last month's report, only about 5500 gallons of the obsolete Woodtox 140 RTU has moved.

### IV. Profit Opportunities

Penta March will be another poor month:

	<u>Lbs.</u>	<u>\$</u>
F P D	279,000	106,000
Customers	445,000	169,000
WTC Products		125,000

The larger sales items will be Woodtox Preprime RTU and Conc., two loads of Penta Conc. from Monsanto effluent and mixed loads of various sapstain control chemicals.

### V. Assistance Requirements

Same needs as January

### VI. General Comments

Blending and warehousing costs at Jones-Hamilton have increased for 1976: .02 gal. for blending and packing 55 gallon drums and bins of Liquid Noxtane and Azide. Warehousing increased \$ 25 per month.

G. S. Robins has raised formulating cost of Super Noxtane .013/Lb.

West coast end sealers raised in cost from .0175 to .02 per pound.

Product cost standards are now being reworked.

### VII. Travel

February - 16th Pittsburgh

TOLS004721

March - None scheduled at this time

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
 J. F. Bridges  
 J. R. Brummett  
 G. J. Gill  
 T. C. Hayson  
 F. M. Klasnick  
 J. M. Montgomery  
 R. B. Putman  
 D. F. Taylerson

To J. D. Hite  
 Location Pittsburgh, PA K/1001  
 Subject Monthly Report January 1976  
Wood Treating Chemicals

From R. P. Simmons  
 Location St. Louis, Missouri  
 Date February 4, 1976

### I. Shipment Highlights - January Accounting Month

#### 1. Camden, New Jersey Warehouse

New England Log Homes	Great Barrington, Massachusetts	
Woodtox 140 Concentrate	14 X 55 Gal.	2,233.00
Woodtox R TU	10 X 5 Gal.	<u>117.50</u>
		<u>2,350.50</u>

Savogran Company	Norwood, Massachusetts	
Woodtox S	10 X 55 Gal.	1,410.75

#### Balance of Shipments

Woodtox PrePrime Conc.	2 X 55 Gal.	363.00
Woodtox 140 R TU	3 X 55 Gal.	288.75

#### 2. Enfield, North Carolina Warehouse

Georgia Pacific Corp.	Varnville, South Carolina	
Lumbrella 33 Yellow H	324 X 3 Gal.	5,880.60

Georgia Pacific Corp.	Monticello, Georgia	
Lumbrella 33 Yellow H	270 X 3 Gal.	4,900.50

Georgia Pacific Corp.	Ahoskie, North Carolina	
Lumbrella 33 Redwood S	162 X 3 Gal.	2,940.30

#### Balance of Shipments

Lumbrella 15 Redwood	6 X 53 Gal.	1,415.10
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TOLS004722

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date February 4, 1976

Page 2

### 3. Conley, Georgia Warehouse

Georgia Pacific Corp.	Monticello, Georgia	
Lumbrella 33 Redwood S	135 X 3 Gal.	2,450.25
Green End Spray 400	4 X 55 Gal.	1,150.23
		<u>3,600.48</u>

Georgia Pacific Corp.	Russellville, South Carolina	
Lumbrella 33 Redwood S	135 X 3 Gal.	2,450.25
Liquid Noxtane SS 1	1 X 55 Gal.	329.49
		<u>2,779.74</u>

Georgia Pacific Corp.	Prosperity, South Carolina	
Lumbrella 33 Yellow H	135 X 3 Gal.	2,450.25

Chas Ingram Lumber	Florence, South Carolina	
Lumbrella 33 Yellow S	54 X 3 Gal.	1,223.10

Holly Hill Lumber	Walterboro, South Carolina	
Lumbrella 33 Yellow S	81 X 3 Gal.	1,470.15

Union Point Lumber	Union Point, Georgia	
Lumbrella 15 Yellow	5 X 53 Gal.	1,086.50

### Balance of Shipments

Liquid Noxtane SS 1	1 X 55 Gal.	320.10
Lumbrella 33 Yellow S	25 X 3 Gal.	618.75

### 4. Newark, California Warehouse

NO SHIPMENTS

### 5. Tuscaloosa, Alabama Blender

THIS LOCATION CLOSED

TOLS004723

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date February 4, 1976

Page 3

### 6. Cotton Valley, Louisiana - Blender

#### Woodtox 140 R TU - Bulk

General Box	Houston, Texas	3032 Gal.	2,425.60
Texas Container	Texarkana, Texas	6062 Gal.	4,752.61
Bennett Box Co.	Texarkana, Texas	5892 Gal.	4,619.33

### 7. Portland, Oregon - Blender

J. H. Baxter Co.	Eugene, Oregon	
Petroset II	6 X 460 #	2,125.20
Gilsonite Inc.	Portland, Oregon	
Redy Coat Penta Conc.	20 X 55 Gal.	2,530.00
Great Western Chemical	Bonners Ferry, Idaho	
Timbertox 40 Conc.	3162 Gal.	6,906.79

#### Balance of Shipments

Petroset II	8 X 42 #	258.72
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### 8. St. Louis, Missouri

#### WTC Products - Major Shipments

Marvin Windows	Warroards, Minnesota	
Woodtox PrePrime RTU	6125 Gal.	5,022.50
Crestline	Wausau, Wisconsin	
Woodtox PrePrime RTU	6068 Gal.	4,975.76

TOLS004724

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 4, 1976

Page 4

### St. Louis, Missouri Continued.....

Caradco Window Woodtox PrePrime RTU	Dubuque, Iowa 6012 Gal.	4,929.84
Malta Manufacturing Co. Woodtox PrePrime RTU	Malta, Ohio 6003 Gal.	4,922.46
Hurd Millwork Woodtox PrePrime RTU	Medford, Wisconsin 4053 Gal.	3,323.46
Northern Sash Woodtox PrePrime RTU	Hawkins, Wisconsin 4069 Gal.	3,753.95
Knapheide Mfg. Co. Woodtox 152 RTU	W. Quincy, Missouri 5592 Gal.	7,269.60
Norton Mfg. Company q Timbertox D-5	Memphis, Tennessee 4831 Gal.	2,995.22
Temple Industries WR - 340 Conc.	Diboll, Texas 48 X 408 #	3,329.28
Weyerhaeuser Co. Liquid Noxtane SS 1	DeQueen, Arkansas 20 X 55 Gal.	6,215.00
Ines Bobillier Stahr Super Noxtane	Santiago, Chile 110 X 100 #	6,335.00
Thatcher Chemical Santobrite	Salt Lake City, Utah 24 X 100 #	1,464.00

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date February 4, 1976

Page 5

### St. Louis, Missouri Continued.....

Georgia Pacific Corp.	Monticello, Georgia	
Lumbrella 33 Redwood S	270 X 3 Gal.	4,900.50

Red Hill Chip Corp.	Conway, South Carolina	
Lumbrella Cherry Tone 25	40 X 53 Gal.	8,798.00
Lumbrella Yellow 33 S	108 X 3 Gal.	<u>1,960.20</u>
		10,758.20

Koppers Company	Magnolia, Arkansas	
K L B Beam Sealer	18 X 55 Gal.	1,782.00

### Balance of Shipments

Woodtox PrePrime Conc.	3 X 55 Gal.	503.25
Woodtox PrePrime R TU	9 X 55 Gal.	904.75
Woodtox 140 R TU	4 X 55 Gal.	385.00
Woodtox R TU	2 X 55 Gal.	203.50
Woodtox 152 R TU	2 X 55 Gal.	220.00
Penta Wood Pres. Conc.	10 X 55 Gal.	2,068.00
Penta Wood Pres. Conc.	22 X 5 Gal.	440.50
Penta Wood Pres. Conc.	12 X 6 X 1 Gal.	291.60
Penta Wood Pres. R TU	1 X 55 Gal.	82.50
Timbertreat 625	1 X 55 Gal.	280.50
Liquid Nortane SS 1	1 X 55 Gal.	335.50
Lumbrella 33 Redwood	32 X 3 Gal.	580.80
Santobrite	8 X 100 #	552.00
Anstrik Blue Conc.	2 X 5 Gal.	300.00
Penta Stain # 509	1 X 55 Gal.	206.25
Penta Stain # 506	8 X 5 Gal.	182.00
B Wood Pres.	17 X 6 X 1 Gal.	275.40

TOLS004726

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 4, 1976

Page 6

### Penta Shipments - January Calendar Month (LBS)

F P D Plants	395,335
Customers	301,893
W T C	<u>70,700</u>
<b>T O T A L</b>	<b>767,928</b>

### Penta Invoicing - January Accounting Month (\$)

	1976	1975
F P D Plants	149,592	307,018
Customers	62,512	240,957
<b>Sub-Total</b>	<b>212,104</b>	<b>547,975</b>
W T C Products Invoiced	129,753	155,682
<b>Grand Total</b>	<b>341,857</b>	<b>703,657</b>

### II. Raw Materials

Supply of all materials continues good. The trend is for little fluctuation in prices; however, general rumors indicate mineral spirits and other petroleum derivatives will increase .02 to .05 per gallon, at least by mid-year. One pigment supplier has announced significant decreases in blue, green and orange dispersions. Solvents - isopropanol, ethylene glycol and acetone (for Liquid Noxane) have all had recent .10 to .15 per gallon increases.

### III. Inventory

A \$50,000 discrepancy between WTC card inventory December closing and computer reporting is under investigation. Our figures have been checked and no notable errors found.

We are still looking for sale of distress/or slow-moving product stock:

TOLS004727

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 4, 1976

Page 7

24565	Gallons	obsolete formula Woodtox 140 R T U	St. Louis
7 1/2	Drums	Lumbrella 15 Clear	Most in Conley
4	Drums	Munsell Grey Anstrik	Portland
10 1/2 X 300 #	Drums	Color Seal	Portland
13 1/2	Drums	Coppertreat 120	St. Louis
4	Drums	Liquid Noxtane I	St. Louis
9 1/2	Drums	Woodset 310 Concentrate	St. Louis
4	Drums	Alkyd Resin Wood Sealer	St. Louis
500	Rolls	Polykraft Grease Paper, Black One Side	St. Louis

### IV. Profit Opportunities

Penta - January was not good. Shipments for the calendar month totalled only 395,335 lbs. to FPD and 301,893 lbs. to customers. February prospect as of this writing are even bleaker - 150,000 lbs. Oroville and 40,000 lbs. Florence for FPD, 40,000 lbs. W. T. Vick - are all the calendar month shipments booked.

### WTC Products - February Sales

#### Millwork Solution (Preprime R T U)

4000 Gal. T/C  
6000 Gal. T/C  
6000 Gal. T/T  
6000 Gal. T/T  
5000 Gal. T/T

Weathershield  
Crestline  
Malta  
Caradco  
DeSoto, Inc.

#### PrePrime Conc. 4000 Gal. T/C 4000 Gal. T/C

W. M. Barr  
Woodhill

TOLS004728

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 4, 1976

Page 8

Penta Wood. Conc. (Monsanto effluent stream)  
4350 Gal. T/T

Hood Lumber

Lumbrella  
5 Pallets  
8 Pallets

E T C Chemical  
Georgia-Pacific Corp.  
Warrenton, Georgia

Liquid Noxtane  
40 Drums  
50 Drums  
10 drums

PBM Supply, Chico, CA  
Cascade Industrial  
Redding, CA  
Snider Lumber, Turlock,  
CA

Preservative Grease - Poletox  
6000 Lbs.

Asplundh

No sales are booked for shipment from Cotton Valley.

Portland shipments include:

20 Drums Woodtox 140 RTU  
2000 Gallons T/T Woodtox 140 RTU  
1000 Gallons T/T Woodtox PrePrime

Gilsonite, Portland  
Beaver Lumber Santa Clara, CA  
Kimberly-Clark Anderson, CA

### V. Assistance Requirements

#### I. More Sales - penta and WTC products.

see our penta sales updating and letter of January 21. OMD is not aggressive with most penta accounts.

TOLS004729

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 4, 1976

Page 9

2. We need an advantage or selling gimmick for a lot of products. Possibilities:
  - a. Formulation of lower cost components
  - b. Better promotion, new sales aids.
  - c. New co-solvents
3. Discussion of course to proceed with proposed blending at Cordova, Alabama.

### VI. General Comments

#### Forecast of February (accounting month) sales:

Penta FPD	\$ 148,000
Customers	98,000
WTC Products	<u>140,000</u>
TOTAL	\$ 386,000

### VII. Travel

January	-	None
February	-	16th Pittsburgh

R. F. Simmons

RFS/sjk

TOLS004730

cc: J. D. Hite  
File Copy  
J. R. Brummett  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To T. A. Beatty  
Location K-1001  
Subject Monthly Report December 1977

From R. F. Simmons  
Location St. Louis, Mo.  
Date December 30, 1977

Wood Treating Chemicals Dept.

### I. Shipments December Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtax S	5 X 55 Gal.
Woodtax Preprime Conc.	1 X 55 Gal.
Penta Wood Pres. Conc.	2 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	8 X 55 Gal.
Timbertreat 623 Conc.	17 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Lumbrella 33 Redwood S	7 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 15 Yellow	16 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 15 Redwood	1 X 55 Gal.
KLB Beam Sealer	8 X 55 Gal.
Mold Control Conc.	1 X 5 Gal.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	12 X 55 Gal.
Liquid Noxtane I	7 X 55 Gal.
Green End Spray 400	7 X 55 Gal.
Penta Stain #509	2 X 55 Gal.
Lumbrella 15 Yellow	3 X 55 Gal.
Lumbrella 33 Clear	4 X 55 Gal.
Lumbrella 33 Redwood S	9 X 55 Gal.
Lumbrella 33 Yellow S	3 X 55 Gal.

TOLS004731

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouses

Liquid Noxtane SSI	6 X 345 Gal.
Liquid Noxtane SSI	96 X 55 Gal.
Liquid Azide 200	16 X 55 Gal.
Red End Sealer	5 X 55 Gal.

### (5) Cotton Valley, Louisiana Blender

0

### (6) Portland, Oregon Blender

Ready Coat Penta Cone.	1	20 X 55 Gal.
Ready Coat Penta RTU		20 X 55 Gal.
Woodtax Preprime T RTU		1518 Gal. Bulk
Woodtax Preprime T RTU		2 X 55 Gal.
Woodtax 140 T RTU		2016 Gal. Bulk
Woodtax 140 T RTU		42 X 55 Gal.
MR 340 Conc.		12 X 408 Lbs.
Petroset II		2 X 460 Lbs.
Timbertox 40 Conc.		1 X 55 Gal.

### (7) Saugat, Illinois Blender

0

### (8) Phoenix, Arizona Blender

0

TOLS004732

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### (9) St. Louis, Missouri Plant

Woodtox Preprime Conc.	4041 Gal. Bulk
Woodtox Preprime Conc.	7 X 55 Gal.
Woodtox Preprime RTU	46700 Gal. Bulk
Woodtox Preprime RTU	7 X 55 Gal.
Woodtox 152 RTU	1 X 55 Gal.
Penta Wood Pres. Conc.	4004 Gal. Bulk
Penta Wood Pres. Conc.	14 X 55 Gal.
Penta Wood Pres. Conc.	1 X 5 Gal.
Penta Wood Pres. RTU	1 X 5 Gal.
TTimbertox D-5	1 X 55 Gal.
Pofolife TF	11 X 45 Lbs.
Pofolife Tags	2 Lots.
Polykraft Paper	5 Rolls
WTC #71	4 X 515 Lbs.
WTC #7-11	10 X 40 Lbs.
Anstrik Blue Conc. 50	1 X 5 Gal.
Clear End Sealer	4 X 55 Gal.
Wood Seal Wax	1 X 426 Lbs.
KLB Beam Sealer	2 X 55 Gal.
Lumbrella 33 Yellow S	81 X 3 Gal.
Dowicide GST Beads	60 X 100 Lbs.
Penta Stain #502	2 X 5 Gal.
Penta Stain #506	20 X 5 Gal.
Penta Stain #509	1 X 55 Gal.
Wolman Pre Stain Cedar Brown	4 X 55 Gal.
Wolman Pre Stain Redwood	2 X 55 Gal.
Penta Check	6 Qts.

TOLS004733

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

### Penta Shipments December Calendar Month - Lbs.

To	WTC	Supplier			Total	Dec. Comparison	
		Monsanto	Reichhold	Vulcan		1976	1975
FPO	158,642*	119,800	39,630	40,000	359,072	278,164	478,666
Cust	12,800	107,938	124,205	-	244,943	366,312	201,635
WTC	-	42,000	-	-	42,000	-	142,600
Total	172,442	269,738	163,835	40,000	646,015	644,476	822,901

\* Warehouse cleanout, after anticipated Monsanto strike did not happen.

### Invoicing (\$) December Accounting Month

	1977	1976	1975
FPO Penta	155,338	176,070	294,198
Customer Penta	140,014	143,224	108,139
WTC Products	159,337	185,584	198,726
Total	454,689	503,878	601,056

### II Raw Materials

Penta - Monsanto plant out of production half of December. Even so, sales so low for the month that inventory still rose.

Solvents - Announced Jan. 1 Increases now on mineral spirits of from 6¢ to 9¢ per gallon depending on grade. Also announcements on ethylene glycol +3¢ Lb., acetone +1¢ Lb., and Isopropanol +6 Lb.

Chemicals - Lithium hydroxide +3¢ Lb., potassium ferrocyanide +5¢ Lb. and Santolene +2¢ Lb.

TOLS004734

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### III Inventory & Expenses

November closing inventory (est. no reports available)	635,891
December Purchases	108,060
Raw Materials	104,806
Finished Goods	479
Containers	2,773
(Resale Penta)	247,680
December Raw Material converted to finished goods	150,050
December estimated cost WTC products sold	134,500
December estimated closing inventory	629,451
January estimated closing inventory	650,000
February estimated closing inventory	670,000
March estimated closing inventory	670,000

Physical inventory of December 20 now being compiled and costed.

December Plant Expenses	
Detail	
130 Safety	303
170 Rent	25
190 Office Expenses & Svcs.	332
270 Telephone	386
290 Postage	150
331 Tankcars	280
350/351 Repairs & Maint	502
370 Stationery & Printing	52
381 Fuel & Power	239
390/392 Direct Op. Expense	629
520 Prof. Svcs. (Traffic & Lab.)	610
170 Whee Rent	1275
390 Whee Op. Exp.	7729*
395 Whee Freight	1512
391 Tote Bins	251
Chem Pumps	223

\* Includes two months blending bills at Jones-Hamilton

TOLS004735

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### IV Sales Forecast

	Jan.	Feb.	Mar.
PPD Penta	180,000	170,000	190,000
Customer Penta	140,000	160,000	200,000
WTC Products	175,000	200,000	200,000
	495,000	530,000	590,000

### V Assistance Requirements

Repeat last month, situation worsening.

### VI General Comments

Dow has announced March 15, withdrawal of manufacture of sodium penta entirely and production of penta prills and pellets, leaving blocks only. At present this leaves us in a dilemma for Liquid Nitropane production when no more EC-7 prills are available. We will attempt to stock for 6 months production while searching for a solution, in lieu of block dissolver installation.

### VII Travel & Meetings

December  
6-7 Pittsburgh  
27 1 Day Vacation

January (Tentative)  
3-4 Bud Harris (at St. Louis)  
Week 16th Portland & Newark  
Week 23rd Quality Assurance Inspection

R. F. Simmons

RFS/pdc

TOLS004736

Wood Treating Chemicals Dept., Koppers Company, Inc.  
5137 Southwest Ave., St. Louis, Mo. 63110  
Telephone 314-772-2200

# KOPPERS

May 19, 1978

Mr. Neil Gallagher  
Time Oil Co.  
12005 N. Burgard Rd.  
Portland, Oregon 97203

Dear Neil:

Upon my visit in February, we left you a booklet which contains sections concerning:

- Product Data
- Pentachlorophenol & Solution Safety Precautions
- Product Material Safety Data Sheets
- Raw Material Data Sheets
- Tank Entering & Cleaning Procedure (Used by Koppers)

Confirming our verbal discussion, this information was given to you as an aid for possible improvement of your understanding of our products and the products you manufacture for us and should not be taken as mandatory recommendations or procedures to be followed. Koppers assumes no liability for the accuracy of the information and it should be used as reference material only.

It is suggested by OSHA that the Product and Raw Material Safety Data Sheets be available for easy reference by your plant workers. We at Koppers incorporate these in our Safety Program, review the program with our workers and have them sign a statement that such a review has been presented and that they understand the safety procedures they should follow. It is, of course, Time Oil's decision to follow or discard these comments. We attach a sample statement that is retained in our employee's files, and recommend an annual review and statement updating. (Exhibit A)

Again, to assist you in establishing a medical surveillance procedure, enclosed you will find a medical examination record. (Exhibit B) The standard items on the form are done upon pre-employment examination; upon annual re-examination our employees are subject to a physical examination that directs its attention to detecting pentachlorophenol exposures. The examination concentrates on the following:

TOLS004737

BZTO104(e)041558

-2-

1. A thorough occupational history with respect to possible exposures to pentachlorophenol and other chemicals.
2. A thorough skin examination checking for acne-like lesions.
3. An examination for chronic irritations of the nose and throat.
4. An examination of the eyes for cornea and iris damage.
5. Blood pressure tests in the standing and sitting position.
6. An examination of the abdomen for possible liver enlargement and/or tenderness.
7. A check on neurological functions in the arms and legs.
8. A chest x-ray.
9. Urinalysis including a microscopic examination, sugar and albumin.
10. Blood chemistry analysis, SMA-12 including blood sugar.

The doctor provides a short narrative explicitly noting abnormalities, particularly of these 10 items.

All of the employees at the St. Louis operation who have a potential exposure are required to participate in this program. After two years there have been no abnormal results from this examination program.

The physicians performing the examinations have been provided with listings of the chemicals handled. These physicians retain the records of the examinations and have been instructed to contact the employee and local management if abnormalities occur.

This extensive program was started to determine the effectiveness of the engineering controls and personal protective equipment programs that were designed to prevent employee exposure to chemicals. It is also possible to determine if there would be any adverse effects to our employees who handle chemicals. The application of this program is audited during routine loss prevention surveys.

TOLS004738

BZTO104(e)041559

-3-

Good personal hygiene practices cannot be overemphasized, therefore we insist on the following standards for employees working with chemicals:

All plant employees-

1. Upon arrival to begin work, wash hands, arms, face and neck with soap and water and rinse thoroughly. This is to remove any trace of oily film that accumulates on the skin since chlorophenols from penta are oil soluble and an oily skin greatly increases the probability of skin absorption of the chlorophenols.
2. This washing is to be repeated at each and every coffee, smoke or lunch break prior to eating or smoking.
3. Each employee is provided a daily change of clothing which should be utilized on plant. Work uniforms are not to be worn away from the plant, nor should street clothing be worn in the plant. An additional uniform clothing change should be on hand for unexpected accidental chemical wetting.
4. Safety items - gloves, goggles, respirators, air-pacs, shoes, boots, rain gear, protective suits and helmets - are all provided and instructions given for usage. This equipment is to be maintained, cleaned, inspected, and used as has been instructed.
5. Finally, each plant employee is required to shower thoroughly at his shift-end, prior to leaving the plant.

Again please note, Koppers has provided this material to you as reference and guidance, not for specific recommendation or required procedure under our blending contract. Advise if you have further questions.

Sincerely,



R. F. Simmons,  
Operations Manager

RFS/pc

TOLS004739

BZTO104(e)041560

The following procedures were reviewed and understood at \_\_\_\_\_ (location) by \_\_\_\_\_  
(supervisor's name) with \_\_\_\_\_ (employee) on  
\_\_\_\_\_ (date).

Pentachlorophenol & Solution Safety Precautions.  
Material Safety Data Sheets

(List)

- 1.
- 2.
- 3.
- 4.
- etc.

Lock-out Procedure.  
Tank Entering & Cleaning Procedure.

Exhibit A

TOLS004740

BZTO104(e)041561

## MEDICAL EXAMINATION RECORD

KOPPERS COMPANY, INC.

DATE 4

NAME \_\_\_\_\_ DATE OF BIRTH \_\_\_\_\_ SEX \_\_\_\_\_ M. S. W. D. SEP. \_\_\_\_\_

ADDRESS \_\_\_\_\_ PHONE \_\_\_\_\_ DIVISION \_\_\_\_\_ LOCATION \_\_\_\_\_

PREVIOUS OCCUPATIONS: (INDICATE EXPOSURES TO DUST AND SKIN IRRITANTS):  
\_\_\_\_\_  
\_\_\_\_\_

## OCCUPATION FOR WHICH EXAMINED:

FAMILY MEDICAL HISTORY	CANCER	DIABETES	EPILEPSY		HEART DISEASE		HIGH BLOOD PRESSURE		MENTAL DISEASE		STROKE	TUBERCULOSIS
	ALLERGY		HERNIA	MALARIA	SKIN CONDITION		PLEURISY	PNEUMONIA	TUBERCULOSIS	RHEUMATISM		
PERSONAL MEDICAL HISTORY	VACCINATIONS		OPERATIONS				MEDICAL ATTENTION PAST 2 YEARS					
	COMPENSATION FOR INDUSTRIAL INJURY		NO	YES	WHEN	FOR WHAT						
	OCCUPATIONAL DISEASE		NO	YES	WHEN	WHAT KIND						
	MENSTRUAL HISTORY		REGULAR			PAINFUL			LOST TIME			

HAVE YOU ANY PHYSICAL DEFECTS OR ALLERGIES WHICH MIGHT MAKE IT INADVISABLE TO ACCEPT EMPLOYMENT IN THE JOB FOR WHICH EXAMINED?  
\_\_\_\_\_  
\_\_\_\_\_

NAME OF FAMILY DOCTOR: \_\_\_\_\_

TOLS004741

I CERTIFY THE ABOVE STATEMENTS TO BE TRUE AND CORRECT

APPLICANT'S SIGNATURE: \_\_\_\_\_

Exhibit B

**February 12, 1979**

**Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, Oregon 97203**

Dear Neil:

Enclosed find a copy of the National Institute of Occupational Safety & Health's guide for pesticide formulators. Whereas your only pesticide formulation is for us, this booklet is basically pertinent information for all industry and is specifically aimed at those plants which handle chemicals and petroleum products.

I hope this booklet enables and aids you to stay abreast of federal standards. Note on the inside front cover addition guides prepared for specific industries, some of which may be of interest to you.

Yours truly,

**R. F. Simmons,  
Operations Manager**

RFS/pds

**TOLS004742**

BZTO104(e)041563

December 16, 1980

Mr. Neil Gallagher  
Time Oil Co.  
P. O. Box 03117  
St. John's Station  
Portland, OR 97203

Dear Neil:

EPA has transferred pentachlorophenol from the list of acutely hazardous wastes (Section 261.33 (E)) to the list of chemicals classified as toxic wastes (Section 261.33 (F)). If discarded under RCRA regulations (45 FR 78532), Penta's new hazardous waste number is U242.

To us, this means that empty drums from penta containing products and penta bags are not subject to RCRA regulations. (Previously, under the regulation, containers were exempt only after triple rinsing or equivalent method of cleaning). Further now, drums, bags and other packaging forms that are stored and/or transported prior to being used, reused, recycled, or reclaimed are not subject to RCRA regulations.

We are not sure at this point if your state has regulations that might provide any other restriction on disposal of empty penta bag or used, unrinsed drums, although we assume this RCRA down regulation will allow you to again return to simple trash disposal of empty bags and disposal of used drums to reconditioners after proper rinsing. We will keep you advised of any regulatory restriction we learn of applicable to your operation and trust you will likewise keep us informed if you hear it locally first.

Best regards,

R. F. Simmons,  
Operations Manager

RFS/pds

TOLS004743

BZTO104(e)041564

cc: Jonette Wharton  
 Frank Klesnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbruster  
 J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report November 1980

From R. F. Simmons  
 Location St. Louis, MO.  
 Date December 2, 1980

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments November Accounting Month WTC Products

(1) Enfield, North Carolina Warehouse	\$10,660
(2) Atlanta, Georgia Warehouse	15,971
(3) Newark, California Warehouse	19,658
(4) Portland, Oregon Blender	85,978
(5) St. Louis, Missouri Plant	<u>230,154</u>
	<u>362,421</u>

#### Penta Shipments November Calendar Month Lbs.

To	Supplier				Comparison Nov.		
	Reichhold	Vulcan	Dow	WTC	Total	1979	1978
FPG	176,815	-	162,242	-	339,057	260,509	377,235
Customer	45,130	-	-	88,350	133,480	32,650	96,700
WTC	<u>150,500</u>	-	-	<u>(88,350)</u>	<u>62,150</u>	<u>74,712</u>	-
Totals	372,445	-	162,242	-	534,687	367,871	473,935

#### Invoicing November Accounting Month \$

	\$ Profit	1980	1979	1978
FPG Penta	13.2	176,189	175,812	189,895
Customer Penta	13.9	73,293	77,069	72,741
WTC Products	24.6	362,421	218,071	196,316
K-CCA-C	13.7	203,814	55,955	52,501
K-CCA-B	10	<u>53,984</u>	<u>36,674</u>	-
Totals		869,701	563,581	511,150

#### Materials

Mineral spirits up 3¢ a gallon, some tightness in supply. Paraffin wax up 4¢ a pound. Fuel oil up \$.078 gallon in last month, nor expected as heating use increases. We expect drums to increase at least 6% by January 1st.

We are still awaiting sales department decision on Lindane purchase for next year. With three months leadtime needed for delivery and stock of Timbertreat at 20 drums, we probably will be out of product before Lindane arrives. A speedy decision is requested.

TOLS004744

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### III. Inventory

October closing inventory	630,465
November purchases	227,445
Raw material	215,895
Containers	11,550
Penta 1408	(137,811)
Penta 1414	(76,209)
November material converted to product	228,476
November cost of product sold	249,664
November closing inventory	608,247
Reserve	11,598

### IV. Sales Forecast \$M

	<u>Dec.</u>	<u>Jan.</u>	<u>Feb.</u>
FPG Penta	288	15	150
Customer Penta	71	14.5	75
WTC Products	200	24	200
K-CCA-B	19	19.5	19
K-CCA-C	202	25.4	150
Totals	780	609	579

### V. St. Louis Comments

No capital expenditures. No AFE's.

No medical problems.

OSHA inspection, no citations. See separate report submitted.

TOLS004745

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	300,000	370,680
Koppers-Hickson	150,000	145,305

#### Production Schedule

Oxide Lbs.	Dec.	Jan.	Feb.
Domestic	187,500	187,500	187,500
Koppers-Hickson	187,500	187,500	187,500

#### Sales Projection

Oxide Lbs.	Dec.	Jan.	Feb.
Domestic	200,000	180,000	180,000
Koppers-Hickson	200,000	180,000	180,000

Trucking - See Glenn Schultz report.

State of Indiana, Dept. of Health has picked up on the EPA air pollution survey and is again following up on the Eckhardt solid waste survey. It is indeed unfortunate that incorrect information was originally supplied thru typing errors from Tom Herr's office on the Eckhardt survey as we will be going thru our third interview Dec. 23 at Valpo by the state.

### VII Newark Plant

Oxide Lbs.	Produced	Shipped
	181,212	203,080

#### Shipments

Ponderosa - drums  
2 Honolulu  
2 Exterior  
Wickes  
Mc Farland Cascade  
Dent Russell

#### Production Schedule

	Dec.	Jan.	Feb.
	120,000	120,000	120,000

TOLS004746

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Sales Projection

Oxide Lbs.	Dec.	Jan.	Feb.
Honolulu	28,700	28,700	-
Koppers	48,000	24,000	48,000
Licenses	70,000	72,000	72,000
Customers	-	24,000	-
	146,700	148,700	120,000

### VIII Travel & Meetings

- Nov. 4 Industrial Risk Insurers  
7 Drake Petroleum  
10 J. Bretson, Relchhold Chemicals  
17-18 Jones-Hamilton at Newark  
19-20 Vacation.  
21 Lithium Corp. OSHA Inspection  
23 Pittsburgh Meeting  
27-28 Thanksgiving  
Dec. 3- J. Hite, J. Kozak, K Cogan, R. Arsenault at St. Louis  
4 - Don Marion Purchasing at St. Louis  
9 Eastman Chemicals  
16-17 Denise Jackson at St. Louis.  
29-30-31 Vacation.  
24-Vaction  
25-26 Christmas Holiday.

R. F. Simmons

RFS/pds

TOLS004747

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbruster  
 J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report October 1980

From R. F. Simmons  
 Location St. Louis, MO.  
 Date October 31, 1980

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments October Accounting Month WTC Products

(1) Enfield, North Carolina Warehouse	\$6,424
(2) Atlanta, Georgia Warehouse	16,228
(3) Newark, California Warehouse	34,967
(4) Portland, Oregon Blender	65,645
(5) St. Louis, Missouri Plant	<u>126,429</u>
	249,703

#### Penta Shipments October Calendar Month Lbs.

to	Supplier				Comparison Oct.		
	Reichhold	Vulcan	Dow	WTC	Totals	1979	1978
FPG	383,555	41520	122,993	-	548,068	451,033	524,800
Customers	88,200	-	80,965	15,000	184,165	206,989	449,708
WTC	<u>56,000</u>	<u>35204</u>	<u>-</u>	<u>(15,000)</u>	<u>76,204</u>	<u>152,100</u>	<u>48,750</u>
Totals	527,755	76,724	203,958	-	808,437	810,122	1,023,258

#### October Accounting Month Invoicing \$

	Profit	1980	1979	1978
FPG Penta	13.75	231,411	331,893	336,008
Customer Penta	16.46	53,320	105,194	320,173
WTC Products	19.6	249,703	213,149	217,002
K-CCA-C	15.4	181,097	65,516	71,945
K-CCA-B	9.5	<u>70,016</u>	<u>15,905</u>	<u>-</u>
Total		785,547	731,657	945,127

#### II Materials

Penta- Reichhold bulk penta availability still spasmodic in Pine Bluff. No other problems. KICT pricing agreed with Reichhold at \$.522 less 10% discount delivered to both Camrose & Burnaby will put material at their plants for \$.61 Lb. Canadian Funds, to be competitive with Uniroyal.

TOLS004748

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

Mineral spirits at St. Louis up \$.035 Gallon. We have received information that Shell is withdrawing mineral spirit production on the west coast which leaves only one supplier, Chevron, still producing for the entire west coast area.

### III Inventory

September closing	632,629
October purchases	155,000
Raw Materials	149,333
Containers	5,667
Penta (1408)	103,507
Penta (1414)	38,220
October material converted to product	203,497
October cost of product sold	168,905
October closing inventory	619,024
Reserve	11,087

### IV Sales Forecast \$M

	Nov.	Profit	Dec.	Jan.
FPG Penta	216	15	130	200
Customer Penta	69	15	40	50
WTC Products	250	24	200	250
CCA-B	38	9.5	19	40
CCA-C	129	15.4	107	140
Totals	702		496	660

### V. St. Louis Comments

No capital expenditures - No AFE's/  
One plant employee for yearly physical, no problems.  
City Air Pollution Control inspection, no problems.

TOLS004749

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-3-

### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	300,000	246,970
Koppers-Hickson	187,500	186,255

#### Production Schedule

Oxide Lbs.	Nov.	Dec.	Jan.
Domestic	262,500	187,500	150,000
Koppers-Hickson	282,500	150,000	112,500

#### Sales Projection

Domestic	240,000	180,000	160,000
Koppers-Hickson	240,000	160,000	120,000

Bruckling - See Glenn Schultz report & attachment.

No capital expense.

Spent \$6652 on repairs for trucks.

One driver had yearly physical, no problems.

Indiana State Board of Health, Air Pollution Control Div. visited on 10/29/80, following up on EPA air pollution control questionnaire. Awaiting stack monitoring results and reporting by Tom Harr's office. No reply to date. We filled out very brief form which should secure us a plant exemption for continued plant operation according to visiting Inspector.

### VII Newark Plant

Oxide Lbs.	Produced	Shipped
	144,552	142,420

#### Shipments-Koppers-Ontario

Mc Farland  
Utah Wood  
Exterior Wood

Selma  
Pacific Wood-Bakersfield

#### Production Schedule

Oxide Lbs.	Nov.	Dec.	Jan.
	180,000	180,000	150,000

TOLS004750

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Sales Projection-Oxide Lbs.

	<u>Nov.</u>	<u>Dec.</u>	<u>Jan.</u>
Honolulu	57,400	28,700	-
Koppers	24,000	24,000	48,000
Licensees	72,000	72,000	72,000
Customers	<u>27,500</u>	<u>24,000</u>	<u>24,000</u>
	180,900	148,700	144,000

### Travel & Meetings

October 14-Nalco Chemical

15-Eastman Chemical

22-23 Valparaiso with A. Anderson & E. Allison

29-31 Valparaiso G. Schultz vacation

November 3-Industrial Risk Insurers

7-Drake Petroleum

10-Jim Bretson, Reichhold Chemicals

14-Vacation day

17-18 Jones-Hamilton

19-20 Vacation day

21-Lithium Corp.

25-Pittsburgh Meeting

27-28 Thanksgiving Holiday

R. F. Simmons

RFS/pds

TOLS004751

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbruster  
 J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-100F  
 Subject Monthly Report September 1980

From R. F. Simmons  
 Location St. Louis, MO.  
 Date September 30, 1980

### St. Louis Missouri Plant & WTC Operations

#### L. Shipments September Accounting Month WTC Products

(1) Enfield, North Carolina Warehouse	\$32,791
(2) Atlanta, Georgia Warehouse	29,587
(3) Newark, California Warehouse	110,543
(4) Portland, Oregon Blender	74,212
(5) St. Louis, Missouri Plant	141,634

#### Penta Shipments September Calendar Month Lbs.

To	Supplier				Comparison Sept.			
	FPG	Reichhold	Vulcan	Dow	WTC	Totals	1979	1978
Customers	-	-	-	84,857	2700	87,557	323,725	708,645
WTC	64,500	-	-	-	(2700)	61,800	73,390	87,305
Totals	334,613	-	-	166,322	-	500,935	825,600	1,459,760

#### September Accounting Month Invoicing \$

	Profit	1980	1979	1978
FPG Penta	15%	182,875	297,589	169,985
Customer Penta	15.8%	68,891	173,927	206,430
WTC Products	25.5	383,685	244,593	238,776
K-CCA-C	13.7	170,134	83,419	-
K-CCAQB	9.5	36,632	845,789	-
Total		842,207	845,710	615,191

TOLS004752

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### II Materials

Penta - Dow has so many people issuing conflicting statements it would take one person working full time just to sort out fact from fiction. Their status on 1000# penta blocks and particularly, sodium penta remains in question.

Reichhold could not supply two loads of bulk on short notice for Oct. 1 delivery, so the customer (IP) got the one on hand, and Montgomery is receiving Vulcan material; there is a bulk car enroute, but neither could wait for delivery until its arrival.

Solvents - All aromatics have taken strong price increases lately. Fuel oils are beginning slight increases due to the Mid-East situation.

Chemicals - Notable increases recently are:

Lithium Hydroxide	12¢ Lb.
Citric Acid	7.5¢ Lb.
Troysan	65¢ Lb.

### III Inventory

August closing	\$703,720
September purchases	193728
Raw Materials	174,938
Containers	18,790
Penta (1408)	(197,107)
Penta (1414)	(96,249)
September Material Converted to Product	203,029
September Cost Product Sold	270,085
September Closing Inventory	627,363
Reserve	10,719

TOLS004753

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### IV. Sales Forecast \$M

	<u>Oct.</u>	<u>\$Profit</u>	<u>Nov.</u>	<u>Dec.</u>
FPG Penta	314	14.2	157	130
Customer Penta	66	15	85	40
WTC Products	250	25.5	250	200
CCA-B	53	9.5	38	19
CCA-C	170	13.7	129	107
Totals	853		659	496

### V. St. Louis Comments

No Capital expenditures - No AFE's.

No medical activity/

Insurance generated internal boiler inspection this month; no problems.

St. Louis Fire Marshal's official inspection also without comment.

Metro St. Louis Sewer District hired consultants from two local engineering firms to make initial inquiries on industrial waste disposal. Their simultaneous visit was confined to an office call noting generalization of our business, SIC code, etc.

### VI. Valparaiso Mix Plant

<u>Oxide Lbs</u>	<u>Produced</u>	<u>Shipped</u>
Domestic	368,500	349,775
Koppers Hickson	337,500	350,515

#### Production Schedule

<u>Oxide Lbs</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Domestic	187,500	187,500	187,500
Koppers-Hickson	187,500	112,500	150,000
Sales Projection			
Domestic	200,000	180,000	180,000
Koppers-Hickson	180,000	120,000	160,000

Trucking - See Glenn Schultz report & attachments.

TOLS004754

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

No capital location expense. Expect to spend \$5000 October from 5015 account-New axles Karikool trailer.

No medical activity.

EPA contractor, Ecology & Environment, Inc. visit to plant Sept. 9 as reported.

Monroeville personnel has stack monitoring on October 1 & 2.

Meeting Oct. 1 with Valparaiso city officials, consulting engineers, other park industries representatives on proposed sewer extension by our plants.

### VII. Newark Mix Plant

Oxide Lbs.	Produced	Shipped
264,639		267,135

Shipments-	Koppers - Oroville & Ontario	Pacific - Bakersfield
Honolulu	- 2 containers	Pacific - Ridgefield
Exterior	- 2	Cascade
Wickes		Selma
Dent & Russell		

Production Schedule	Oct.	Nov.	Dec.
Oxide Lbs.	210,000	180,000	180,000

### Sales Projection (Oxide Lbs.)

Honolulu	-	57,400	28,700
Koppers	48,000	24,000	24,000
Licenses	96,000	72,000	72,000
Customers	24,000	24,000	24,000
Totals	168,000	177,400	148,700

TOLS004755

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbuster  
 J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-100M  
 Subject Monthly Report August 1980

From R. F. Simmons  
 Location St. Louis, MO.  
 Date September 5, 1980

### St. Louis Missouri Plant & WTC Operations

#### I Shipments August Accounting Month WTC Products

(1) Enfield, North Carolina Warehouse	\$16,648
(2) Atlanta, Georgia Warehouse	27,841
(3) Newark, California Warehouse	17,020
(4) Portland, Oregon Blender	31,521
(5) St. Louis, Missouri plant	131,739

#### Penta Shipments August Calendar Month Lbs.

To	Supplier	Reichhold	Vulcan	Dom	WTC	Totals	Comparison Aug.
FPG	130,630	-	-	-	-	130,631	1979 677,705 591,093
Customers	210,185	-	78,210	41,000	329,395	439,768	1978 416,288
WTC	78,750	-	-	(41,000)	37,750	79,340	133,840
Totals	419,565	-	78,210	-	497,775	1,196,813	1,141,221

#### August Accounting Month Invoicing \$

	Profit	1980	1979	1978
FPG Penta	15.2	136,019	356,041	251,669
Customer Penta	15.2	131,294	267,267	171,242
WTC Products	26.4	222,279	276,654	300,579
KCCA-C	15.4	401,247	104,679	-
KCCA-B	9.5	36,879	46,344	-
Totals		927,718	1,050,986	723,490

#### II Materials

Penta - Bag price supply is somewhat short, although demand is remaining slow.  
 Sodium Penta - If we are serious about continuing export business we should search for a new supplier.  
 Solvents & Chemicals- Nothing of consequence to report. Minor increases in cost this month.

TOLS004756

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### III Inventory

July closing inventory	760,677
August purchases	107,846
Raw Materials	97,614
Containers	10,232
Penta (1408)	92,935
Penta (1414)	74,437
August material converted to product	158,883
August cost product sold	164,763
August closing inventory	703,760
Reserve	10,384

### IV Sales Forecast

	Sept.	\$ Profit	Oct.	Nov.	Dec.
FPG Penta	159,000	15	150,000	150,000	100,000
Customer Penta	25,000	15	75,000	50,000	25,000
WTC Products	225,000	28	175,000	175,000	160,000
K-CCA-B	19,000	12	19,000	38,000	19,000
K-CCA-C	230,000	19	180,000	160,000	160,000
Totals	658,000		599,000	573,000	464,000

### V St. Louis Comments

AFE none  
No medical activity

### VI Valparaiso Mix Plant

Oxide Lbs	Produced	Shipped
Domestic	412,500	443,506
Koppers-Hickson	412,500	391,335
	825,000	834,841

TOLS004757

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Production Schedule	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Oxide Lbs.				
Domestic	337,500	300,000	300,000	225,000
Koppers Hickson	<u>300,000</u>	<u>225,000</u>	<u>187,500</u>	<u>150,000</u>
Totals	637,500	525,000	487,500	375,000

Sales Projection	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Domestic	340,000	280,000	280,000	220,000
Koppers-Hickson	<u>300,000</u>	<u>220,000</u>	<u>180,000</u>	<u>140,000</u>
Totals	640,000	500,000	460,000	360,000

Trucking—See Glenn Schultz report and attachment.

No capital expense

No medical activity

Blending — Shipments have been delayed twice this month pending arrival of chromic acid.

### VII Newark Mix Plant

Oxide Lbs.	<u>Produced</u>	<u>Shipped</u>
	122,275	102,025

#### Shipments

Exterior Wood

Selma

Wickes

Honolulu

Production Schedule	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Oxide Lbs.	240,000	180,000	180,000	120,000

#### Sales Projection

Honolulu	28,700	28,700	28,700	-
Koppers	48,000	48,000	48,000	24,000
Licenses	96,000	72,000	72,000	48,000
Non-Licenses	48,000	24,000	24,000	24,000
Totals	220,700	172,700	172,700	96,000

Beginning Oct. 1, expect to see dramatic chrome increase.

TOLS004758

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Robert Arsenault  
Jack Kozak  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/ Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report July 1980

From R. F. Simmons  
Location St. Louis, MO.  
Date July 31, 1980

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments July Accounting Month

##### (1) Camden, New Jersey Warehouse

Closed this location in July. Material all moved to St. Louis.

##### (2). Enfield, North Carolina Warehouse

Liquid Noxane SSI	13 X 55 Gal.
Liquid Noxane I	11 X 55 Gal.
Lumbrella 33 Clear	4 X 55 Gal.
Lumbrella 33 Clear	206 X 3 Gal.
Lumbrella 33 Yellow	54 X 3 Gal.
Lumbrella 15 Redwood	2 X 55 Gal.
KLB Beam Sealer	10 X 55 Gal.
End Spray 400 Yellow	6 X 5 Gal.
End Spray 400 Green	10 X 5 Gal.
End Spray 400 Red	5 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxane SSI	9 X 55 Gal.
Liquid Noxane I	4 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.
Lumber Coat Conc. Yellow	18 X 55 Gal.
Lumbrella 33 Yellow S	2 X 55 Gal.
Lumbrella 33 Yellow S	54 X 3 Gal.
Green End Spray 400	2 X 55 Gal.
Red End Spray 400	1 X 55 Gal.

TOLS004759

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	7 X 345 Gal.
Liquid Noxtane SSI	66 X 55 Gal.
Liquid Azide 200	1 X 55 Gal.
Clear End Sealer	1 X 262 Gal.
Orange End Sealer	5 X 55 Gal.
Bright Red End Sealer	5 X 55 Gal.
Alkaline Corrosive Liquid	1 X 50 Gal.

### (5) Portland, Oregon Blender

Woodtox 140 T. Conc.	2872 Gal. Bulk
WR-340 Conc.	6 X 408 Lbs.
Timbertox 40 Conc.	10 X 55 Gal.
Mineral Spirits	2 X 55 Gal.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	19622 Gal. Bulk
Woodtox Preprime RTU	4 X 55 Gal.
Woodtox Preprime Conc.	4 X 55 Gal.
Woodtox 140 Conc.	1 X 55 Gal.
Woodtox 140 RTU	4 X 55 Gal.
Woodtox RTU	5 X 5 Gal.
Woodset 310 Conc.	1 X 55 Gal.
Wk-60 Solvent	72420 Lbs. Bulk
Wk-60 Solvent	19 X 55 Gal.
WR-340 Conc.	10 X 415 Lbs.
Penta Wood Pres. Conc.	8 X 55 Gal.
Penta Wood Pres. Conc.	36 X 5 Gal.
Penta Wood Pres. RTU	4 X 55 Gal.
Penta Wood Pres. RTU	6 X 5 Gal.
Shell Wax 100	2024 Lbs.
Liquid Noxtane SSI	4 X 55 Gal.
Liquid Noxtane I	14 X 55 Gal.
Timbertreat 625	2 X 55 Gal.
Timbertreat 625	1 X 5 Gal.

TOLS004760

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Lumbrella 25 Brown	2 X 55 Gal.
Lumbrella 33 Clear	50 X 55 Gal.
Lumbrella 33 Yellow S.	54 X 3 Gal.
Lumber Coat Conc. Yellow	2 X 55 Gal.
Woodtreat C-81 RTU	11870 Gal. Bulk
Woodtreat C-81 RTU	1 X 55 Gal.
Woodtreat C-81 RTU	10 X 5 Gal.
Woodtreat C-81 Conc.	5 X 55 Gal.
Woodtreat C-81 Conc.	6 X 5 Gal.
Coppertreat 00 RTU	12 X 1 Gal.
Clear End Sealer	27 X 5 Gal.
Wood Seal Wax	1 X 440 Lbs.
Penta Check	6 Qts.

### Penta Shipments July Calendar Month Lbs.

To	Supplier						Comparison July	
	Reichhold	Vulcan	Dow	NTC	Totals		1979	1978
FPG	*220,755	0	38,280	0	*259,035	661,000	280,815	
Customers	87,020	0	124,185	36,250	247,455	397,229	389,047	
WTC	105,000	0	0	(36,250)	68,750	148,380	205,070	
Totals	*412,775	0	162,465	0	*575,240	1,206,679	874,932	

\*approx

### July Accounting Month Invoicing \$

	\$ Profit	1980	1979	1978
FPG Penta	15.2	91,063	252,810	104,223
Customer Penta	13.3	183,562	63,361	263,944
WTC Products	26.3	202,726	122,767	283,841
K-CCA-C	15.0	207,813	72,957	-
K-CCA-B	15.1	18,320	59,742	-
Totals		703,484	571,637	652,088

### II. Materials

Penta - Reichhold is just ending a two week planned maintenance and vacation shutdown; no shortages or problems developed as a result. Dow's sodium penta production has not resumed and repeated inquiry still brings only vague reply about scheduling. This is hampering sales.

TOLS004761

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Solvents - Mineral spirits supplies are becoming tight due to refinery curtailment and closings; prices however are static at the minute.

Chemicals - most materials we use have had significant increases in the past two months, basically due to energy and transportation increases.

### III. Inventory

June closing inventory		738,673
July Purchases		151,718
Raw Materials	146,863	
Containers	4,853	
Penta (1406)	(93,811)	
Penta (1414)	(92,583)	
July material converted to product		135,979
July cost product sold		(20,595)
July closing inventory		719,998

June inventory pickup was \$25,595.

### IV Sales Forecast

	Aug.	\$ Profit	Sept.	Oct.
FPG Penta	130,000	15	150,000	150,000
Customer Penta	65,000	15	75,000	75,000
WTC Products	150,000	27	175,000	175,000
K-CCA-8	37,000	15.1	37,000	19,000
K-CCA-C	230,000	17.8	180,000	160,000
Totals	612,000		617,000	579,000

TOLS004762

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### V. St. Louis Comments

AFE-None

No medical activity

All products not recosted in July, will be accomplished in August, to reflect the latest round of material increases.

Missouri State Hazardous Waste Generator application to T. Marr for filing with state.

Federal application for St. Louis submitted to Marr also; awaiting blanks from EPA for Valpo.

In possession of and working on OSHA contractor questionnaires for St. Louis and Valpo.

### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	487,500	513,545
Koppers-Hickson	375,000	330,185

Production Schedule	Aug.	Sept.	Oct.
Domestic	300,000	262,500	300,000
Koppers-Hickson	300,000	300,000	262,500

Sales Projection			
Domestic	300,000	260,000	300,000
Koppers-Hickson	300,000	300,000	260,000

Trucking - See Glenn Schultz report and attachment.

Capital expense	none
Medical activity	none

TOLS004763

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-6-

### VII Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	<u>120,509</u>	<u>149,250</u>

Shipments	Cust. Pacific, Ridgefield	Trans. Ontario
Lic. Kellogg Exterior Pacific, Bakersfield	Dant & Russell	

### Production Schedule

Oxide Lbs.	Aug.	Sept.	Oct.
	<u>150,000</u>	<u>120,000</u>	<u>120,000</u>
Sales Projection			
Honolulu	<u>28,700</u>	-	<u>28,700</u>
Koppers	<u>24,000</u>	<u>24,000</u>	<u>24,000</u>
Licensees	<u>97,325</u>	<u>48,000</u>	<u>48,000</u>
Non-Licensees	<u>3,500</u>	<u>38,000</u>	<u>24,000</u>
Total	<u>153,525</u>	<u>120,000</u>	<u>124,700</u>

### VIII Travel & Meetings

July 1-2 Valparaiso with J. Kozak  
July 3 & 7 Vacation days  
July 16 Aetna Inspection St. Louis, J. Sullivan  
July 28 Eastman Chemical- Cantrell  
July 29 EPA Hazardous Waste Seminar, Kansas City-with H. Struessel  
Aug. 4-8 Valparaiso, Schultz vacation  
Aug. 11-15 Vacation.

R. F. Simmons

RFS/pds

TOLS004764

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Robert Arsenault  
Jack Kozak  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report June 1980

From R. F. Simmons  
Location St. Louis, MO.  
Date July 2, 1980

### St. Louis, Missouri Plant & WTC Operations

#### I Shipments June Accounting Month

##### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	2 X 55 Gal.
Woodtax 140 RTU	1 X 55 Gal.
Woodtax Preprime RTU	1 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxane I	28 X 55 Gal.
Liquid Noxane SSI	21 X 55 Gal.
Lumbrella 33 Clear	13 X 55 Gal.
Lumbrella 33 Clear	270 X 3 Gal.
Lumbrella 33 Redwood S	12 X 55 Gal.
Lumbrella 33 Redwood S	54 X 3 Gal.
Red Orange End Spray 400	4 X 55 Gal.
Red End Spray 400	15 X 5 Gal.
Green End Spray 400	20 X 5 Gal.
Yellow End Spray 400	9 X 5 Gal.
Blue End Sealer	1 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxane I	25 X 55 Gal.
Liquid Noxane SSI	8 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Lumbrella 33 Clear	17 X 55 Gal.
Lumbrella 33 Redwood S	1 X 55 Gal.
Lumbrella 33 Yellow	27 X 3 Gal.
Lumber Coat Conc. Yellow	4 X 55 Gal.
Lumber Coat Conc. Yellow	81 X 3 Gal.
Red Orange End Spray 400	10 X 55 Gal.
Orange End Spray 400	5 X 55 Gal.
Red End Spray	1 X 55 Gal.
Red End Sealer	3 X 5 Gal.

TOLS004765

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxane SSI	7 X 345 Gal.
Liquid Noxane SSI	48 X 55 Gal.
Liquid Azide 200	19 X 55 Gal.
Clear End Sealer	1 X 262 Gal.
Clear End Sealer	11 X 55 Gal.
Orange End Sealer	10 X 55 Gal.
Red End Sealer	5 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtax Preprime RTU	2999 Gal. Bulk
Woodtax 140 Conc.	73 X 55 Gal.
Timbertox 40 Conc.	100 Gal. Bulk
Timbertox 40 Conc.	1 X 55 Gal.
WK-60 Solvent	6 X 55 Gal.
WR-340 Conc.	18 X 408 Lbs.
Petroset II	16 X 455 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	10551 Gal. Bulk
Woodtax Preprime RTU	36 X 55 Gal.
Woodtax Preprime Conc.	7 X 55 Gal.
Woodtax Preprime Conc.	3 X 5 Gal.
Woodtax S Conc.	90 X 55 Gal.
Woodtax 140 RTU	3 X 55 Gal.
Woodtax RTU	5 X 55 Gal.
Woodtax RTU	32 X 5 Gal.
Penta Wood Pres. Conc.	18 X 55 Gal.
Penta Wood Pres. Conc.	29 X 5 Gal.
Penta Wood Pres. RTU	3 X 55 Gal.
Penta Wood Pres. RTU	26 X 5 Gal.
390 Solvent	11200 Gal. Bulk
WK- 60 Solvent	72240 Lbs. Bulk

TOLS004766

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-3-

Woodtreat C-81 RTU	3962 Gal. Bulk
Woodtreat C-81 RTU	3 X 55 Gal.
Woodtreat C-81 RTU	5 X 5 Gal.
Woodtreat C-8 Conc.	12 X 55 Gal.
Woodtreat C-8 Conc.	5 X 5 Gal.
Coppertreat 120 RTU	3 X 5 Gal.
Tribucide P-75 RTU	10 X 55 Gal.
Liquid Noxane SSI	26 X 55 Gal.
Liquid Noxane I	8 X 55 Gal.
Timbertreat 625	8 X 55 Gal.
Timbertreat 625	4 X 5 Gal.
WTC #71	1 X 515 Lbs.
WTC #74	2 X 460 Lbs.
Lumbrolia 33 Cherry Tone	54 X 55 Gal.
Clear End Sealer	1 X 55 Gal.
Clear End Sealer	6 X 5 Gal.
Red End Sealer	1 X 55 Gal.
Red End Sealer	13 X 5 Gal.
KLB Beam Sealer	12 X 55 Gal.
Black End Spray 400	1 X 5 Gal.
Penta Stain #502	33 X 5 Gal.
Penta Stain #507	3 X 5 Gal.
Anstrik Blue Conc.	5 X 5 Gal.
Woodtreat AA	7 X 40 Lb.

### Penta Shipments June Calendar Month Lbs.

To	Supplier	Comparison June					
		1979	1978	Total	WTC	Vulcan	Dow
FPG	*214,315	-	40,373	\$254,688	-		
Customer	41,320	-	*40,000	*109,770	*28,450		
WTC	56,000	-	-	* 27,350	(28,450)		
Totals	*311,635	-	*80,373	\$392,008	-		

\* approximate

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-4-

### June Accounting Month Invoicing \$

	<u>\$ Profit</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>
FPG Penta	13.5	203,765	195,186	213,518
Customer Penta	16	89,067	123,154	193,107
WTC Products	27	263,860	261,548	279,969
K-CCA-C	14.8	184,947	66,436	-
K-CCA-B	15.1	37,291	30,430	-
Totals		778,930	676,754	686,594

### II. Materials

Penta-Sales remain exceedingly slow; Dow's announcement of stopping manufacture at year-end 1980 had no effect on the market. We estimated to Paul Goydan yesterday that our requirements from Dow would not exceed 120,000 Lbs./Mo. the balance of the year. Vulcan has given no indication of price increase, so Dow and Reichhold remain competitive with TVA's.

Solvents- West Coast mineral spirits are still increasing monthly; midwest pricing is holding with only token 1¢/gallon increases. Alcohols and glycols still show significant monthly increases.

Chemicals-Citric acid, lithium, all pigments, all have had recent 5-10% increases.

### III Inventory

May closing inventory	729,395
June purchases	203,703
Raw Materials	193,849
Containers	9,854
Penta (1408)	(216,817)
Penta (1414)	( 40,543)
June material converted to product	205,733
June cost product sold	223,317
Cost of product sold omitted in May	6,896
June closing inventory	702,885

TOLS004768

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### IV. Sales Forecast

	<u>July \$</u>	<u>Profit</u>	<u>Aug.</u>	<u>Sept.</u>
FPG Penta	146,000	15	175,000	175,000
Customer Penta	107,000	15	75,000	75,000
WTC Products	190,000	26.5	200,000	175,000
K-CCA-B	38,000	15.3	19,000	38,000
K-CCA-C	100,000	16	120,000	100,000
Totals	581,000		589,000	563,000

### V. St. Louis Comments

AFE-none

Plant labor contract settled, 8% increases.

Medical activity-none

### VI. Valparaiso Mix Plant

Oxide Lbs.	<u>Produced</u>	<u>Shipped</u>
Domestic	390,825	412,500
Koppers-Hickson	310,060	300,000
	700,000	712,500

### Production Schedule

	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>
Domestic	412,500	337,500	262,500
Koppers-Hickson	337,500	300,000	300,000

### Sales Projection

Domestic	380,000	340,000	260,000
Koppers-Hickson	280,000	300,000	300,000

Trucking - See Glenn Schultz report and attachment.

Capital expense none.

Medical activity - Schultz 6 months physical during the month.

### VII. Newark Mix Plant

Oxide Lbs.

produced  
92,940

shipped  
72,300

TOLS004769

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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Shipments      2 Exterior Wood  
                  1 McFarland Cascade

**Production schedule**

Oxide Lbs.	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>
	90,000	120,000	90,000

**Sales Projection**

Honolulu	-	28,700	28,700
Koppers	48,000	24,000	24,000
Licensees	48,000	48,000	48,000
Non-Licensees	-	-	-

**VIII Travel-Meetings**

June 12 Vacation day.  
17-18 Portland Inventory.  
19-20 Newark Inventory  
July 2 Valparaiso with Kozak  
3 & 7 vacation days

R. F. Simmons

RFS/pds

TOLS004770

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Robert Arsenault  
J. J. Kozak  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report May 1980

From R. F. Simmons  
Location St. Louis, MO.  
Date May 29, 1980

### St. Louis, Missouri Plant & WTC Operations

#### I Shipments May Accounting Month

##### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	1 X 55 Gal.
Woodtox Preprime RTU	1 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I	9 X 55 Gal.
Liquid Noxtane SSI	23 X 55 Gal.
Liquid Azide 200	15 X 55 Gal.
Lumbrella 33 Clear	8 X 55 Gal.
Lumbrella 33 Clear	27 X 3 Gal.
Green End Spray 400	4 X 5 Gal.
Yellow End Spray 400	1 X 5 Gal.
Blue End Sealer	4 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	16 X 55 Gal.
Liquid Noxtane SSI	10 X 55 Gal.
Timbertreat 625	4 X 55 Gal.
Lumbrella 33 Clear	11 X 55 Gal.
Lumber Coat Conc. Yellow	9 X 55 Gal.
Red Orange End Spray 400	2 X 55 Gal.
Green End Spray 400	1 X 55 Gal.

##### (4) Newark, California Warehouse

Liquid Noxtane SSI	2 X 345 Gal.
Liquid Noxtane SSI	73 X 55 Gal.
Clear End Sealer	10 X 55 Gal.

TOLS004771

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
Location \_\_\_\_\_ Location \_\_\_\_\_  
Subject \_\_\_\_\_ Date \_\_\_\_\_

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### (5) Portland, Oregon Blender

Woodtax Preprime T RTU	2999 Gal. Bulk
Woodtax 140 T Conc.	3 X 55 Gal.
Woodtax 140 T RTU	2 X 55 Gal.
Timbertox 40 Conc.	100 Gal. Bulk
Timbertox 40 Conc.	1 X 55 Gal.
WR 340 Conc.	12 X 408 Lbs.
WK-60 Solvent	6 X 55 Gal.
Petroset II	6 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	23735 Gal. Bulk
Woodtax Preprime RTU	47 X 55 Gal.
Woodtax 140 RTU	2970 Gal. Bulk
Woodtax 140 RTU	2 X 55 Gal.
Woodtax 140 Conc.	2 X 55 Gal.
Woodtax Preprime Conc.	2 X 55 Gal.
Woodtax Preprime Conc.	2 X 5 Gal.
WK-60 Solvent	71089 Lbs. Bulk
Penta Wood Pres. Conc.	48 X 55 Gal.
Penta Wood Pres. Conc.	2 X 5 Gal.
Penta Wood Pres. RTU	6 X 5 Gal.
Timbertox D-5 RTU	25 X 55 Gal.
Wood Sealer Alkyd Resin	2 X 55 Gal.
Pole Life TF	10 X 45 Lbs.
Liquid Noxane SSI	1 X 55 Gal.
Liquid Noxane I	8 X 55 Gal.
Timbertreat 625	3 X 55 Gal.
WTC #71	14 X 515 Lbs.
Lumbrilla 25 Red Brown	2 X 55 Gal.
Lumbrilla 33 Clear	50 X 55 Gal.
Tribucide P-75	3 X 55 Gal.
Woodtreat C-8 Conc.	12 X 55 Gal.
Woodtreat C-8 RTU	1 X 55 Gal.
Woodtreat C-8 RTU	2 X 5 Gal.
Coppertreat 120 RTU	1 X 5 Gal.
Wolman Prestain Cedar Brown Conc	5 X 55 Gal.

TOLS004772

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Clear End Sealer	7 X 55 Gal.
Blue End Sealer	14 X 5 Gal.
Green End Sealer	2 X 5 Gal.
Red Orange End Spray 400	10 X 5 Gal.
Woodtreat AA	16 X 40 Lbs.
Penta Stain #502	1 X 55 Gal.
Penta Stain #502	12 X 5 Gal.
Penta Stain #506	16 X 5 Gal.
Penta Stain #509	1 X 55 Gal.
Black Poly Paper	10 rolls

### Penta Shipments May Calendar Month Lbs.

#### Supplier:

To	Reichhold	Vulcan	Dow	WTC	Total	Comparison May	
						1979	1978
FPG	346,330*	43,840	81,330	-	471,500*	401,105	566,225
Customers	77,965*	-	11,786	22,750	112,501*	248,740	517,289
WTC	-	-	-	(22,750)	(22,750)	93,975	80,250
Totals	424,295*	43,840	93,116	-	561,251*	743,820	1,163,764

\* approximate

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### May Accounting Month Invoicing \$

	\$ Profit	1980	1979	1978
FPG Penta	14%	246,527	303,297	221,657
Customer Penta	8.3	73,853	102,135	191,906
WTC Products	27	189,700	310,402	261,449
K-CCA-C	15.8	66,139	64,551	-
K-CCA-B	12.2	17,774	43,908	-
<b>Totals</b>		<b>593,993</b>	<b>824,293</b>	<b>673,012</b>

TOLS004773

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### II. Materials

Penta - Although both Dow & Reichhold started .03/lb. TVA during the first week of May to equal Vulcan pricing, there has been no increased order activity. Deaths at Sonford and Chapman attributed to sodium penta production are certain to have adverse market effects of long consequence.

Solvents - There is no overabundance of solvents although one source is offering 5¢/gallon TVA on mineral spirits, albeit a poor grade. Specialty aromatic solvents, Isopropanol, ethylene glycol, acetone and filtraz are all still rising in cost.

### III. Inventory

April closing inventory	838,117
May purchases	27,407
Raw Materials	22,759
Containers	4,648
Penta (1408)	(175,559)
Penta (1414)	( 42,752)
May material converted to product	133,161
May estimated cost product sold	209,000
May estimated closing inventory	656,524

See attachment for estimated inventory for following months.

### IV Sales Forecast

	June	\$ Profit	July	August
FPG Penta	226,000	13.3	250,000	250,000
Customer Penta	99,000	16.3	75,000	65,000
WTC Products	200,000	26.5	200,000	200,000
K-CCA-B	19,000	15.3	38,000	19,000
K-CCA-C	85,000	16	60,000	50,000
Totals	629,000		623,000	584,000

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### V. St. Louis Comments

AFE None

Medical activity - Blender F. Brock to dermatologist for routine chloroacne pestule removal.

### New Products

CB- Problem noted last month not resolved; separate report J. Kozak for elaboration. No reply from Tenneco; competitive material for testing sent Ventron. Production proceeding cautiously with Ventron material.

Tribucide - No sales activity except to one 10 drum order expected last month..

Coppertreat - Activity so small as to warrant no mention.

Lumber Coat Conc. (Dry) - Little activity as most Lumbrella sales switching to clear product; await field trialing for some indication of market direction.

Woodtreat WB- Further field tests at millwork plant (Crestline) and as sapstain control at log home producer this month.

### VI. Valparaiso Mix Plant

Oxide Lbs	Produced	Shipped
Domestic	262,500	310,745
Koppers-Hickson	225,000	290,815
Non-Com	-	(40,000)
	487,500	601,560

### Production Schedule

	June	July	August
Domestic	300,000	300,000	262,500
Koppers-Hickson	300,000	262,500	262,500
Sales Projection			
Domestic	320,000	260,000	240,000
Koppers-Hickson	280,000	240,000	240,000

TOLS004775

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Trucking - See Glenn Schultz report and attachment.

Capital Expense None

Medical activity - Plant 6 months physicals done.

### VII. Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	187,564	163,740

#### Shipments

Exterior Wood	Hale Kauai
Selma	Koppers Ontario
Wickes	Koppers Oroville
Pacific Wood	

#### Production Schedule

Oxide Lbs	June	July	Aug.
	90,000	120,000	120,000

#### Sales Projection

Honolulu	-	-	57,400
Koppers	-	48,000	24,000
Licensees	72,000	72,000	48,000
Non-Licensees	-	-	-

#### VIII Travel/Meeting

May 9/10 Valparaiso

19/20 Vacation days

June 16 week Newark & Portland (including inventory).

R. F. Simmons

RFS/pds

TOLS004776

# KOPPERS

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Robert Arsenault  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

## Interoffice Correspondence

To J. D. Hite  
Location K-100F  
Subject Monthly Report April 1980

From R. F. Simmons  
Location St. Louis, Mo.  
Date May 1, 1980

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments April Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox 140 Conc.	5 X 55 Gal.
Woodtox RTU	10 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	20 X 55 Gal.
Liquid Noxtane I	28 X 55 Gal.
Liquid Azide 200	1 X 55 Gal.
Timbertreat 625	5 X 55 Gal.
Lumbrella 33 Redwood S	11 X 55 Gal.
Lumbrella 33 Clear	2 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Green End Spray 400	40 X 5 Gal.
Yellow End Spray 400	29 X 5 Gal.
Red End Spray 400	10 X 5 Gal.
Wood Seal Wax	2 X 400 Lbs.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	3 X 55 Gal.
Liquid Noxtane I	14 X 55 Gal.
Timbertreat 625	5 X 55 Gal.
Lumbrella 33 Clear	16 X 55 Gal.
Lumber Coat Conc. Yellow	12 X 55 Gal.
Red Orange End Spray 400	9 X 55 Gal.

##### (4) Newark, California Warehouse

Liquid Noxtane SSI	5 X 345 Gal.
Liquid Noxtane SSI	55 X 55 Gal.
Clear End Sealer	1 X 300 Gal.
Clear End Sealer	4 X 55 Gal.
Orange End Sealer	10 X 55 Gal.
Alkaline Corrosive Liquid	1 X 50 Gal.

TOLS004777

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### (5) Portland, Oregon Blender

Woodtax Preprime T RTU	81 X 55 Gal.
Woodtax Preprime T RTU	6921 Gal. Bulk
Woodtax 140 T Conc.	10 X 55 Gal.
Woodtax 140 T RTU	2 X 55 Gal.
Timbertox 40 Conc.	60 X 55 Gal.
Timbertox 40 Conc.	125 G. Bulk
WR 340 Conc	36 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	11925 Gal. Bulk
Woodtax Preprime RTU	18 X 55 Gal.
Woodtax RTU	10 X 5 Gal.
Woodtax Preprime Conc.	2 X 55 Gal.
Woodtax 140 RTU	4005 Gal. Bulk
Woodtax 140 RTU	10 X 55 Gal.
WK-60 Solvent	75 X 55 Gal.
Penta Wood Pres. Conc.	5 X 55 Gal.
Penta Wood Pres RTU	7 X 55 Gal.
Penta Wood Pres.RTU	6 X 5 Gal.
WR 340 Conc.	10 X 400 Lbs.
Poletox	400 X 57 Lbs.
Polelife	10 X 45 Lbs.
Tritox	26 X 57 Lbs.
Woodtreat AA	2 X 40 Lbs.
Liquid Noxtane SSI	10 X 55 Gal.
Liquid Noxtane I	37 X 55 Gal.
Timbertreat 625	23 X 55 Gal.
Lumber Coat Conc. Yellow	12 X 55 Gal.
Lumbrella 33 Redwood S	5 X 55 Gal.
Lumbrella 33 Yellow H	1 X 55 Gal.
Lumbrella 33 Yellow S	54 X 3 Gal.
Lumbrella 33 Redwood S	54 X 3 Gal.

TOLS004778

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Clear End Sealer	6 X 55 Gal.
Red End Sealer	1 X 55 Gal.
Blue End Sealer	11 X 5 Gal.
Woodtreat C-8 Conc.	14 X 55 Gal.
Coppertreat 120 RTU	6 X 5 Gal.
Penta Stain #502	43 X 5 Gal.
Penta Stain #506	3 X 5 Gal.
Polykraft Paper Brown	7 rolls
C Pole Wrapper	3 rolls

### Penta Shipments April Calendar Month Lbs.

	Supplier				Comparison April		
To	Reichhold	Vulcan	Dow	WTC	Total	1979	1978
FPG	164,490	91,652	242,194	-	498,336	426,289	435,350
Customer	39,680	47,192	30,297	40,600	157,769	142,993	404,684
WTC	-	-	-	(40,600)	(40,600)	104,000	29,400
Totals	204,170	138,844	272,491	-	615,505	673,284	869,484

### April Accounting Month Invoicing \$

	\$ Profit	1980	1979	1978
FPG Penta	12.2	254,205	91,728	187,034
Customer Penta	15.2	91,637	137,766	216,655
WTC Products	27	286,130	298,975	305,503
KCCA-C	15.6	88,744	54,652	-
KCCA-B	10.4	34,677	60,002	-
Totals		735,393	643,123*	709,073*

\*Including credits

### II. Materials

Penta- For a change, we have seen suppliers looking for orders. Although competition is beginning, there is no indication of Dow or Reichhold reducing their \$.56 price back to Vulcan's \$.53. Market has weakened, most customers are very slow and Koppers' plants are the major penta users.

TOLS004779

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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Solvents - Some sources of mineral spirits on west coast are returning to limited supplies, after increases of near 45¢/gallon in last 6 months and no stock. Midwest supply of mineral spirits remains moderately tight, but pricing has started some bit of stabilazation. Specialty chemicals still increasing frequently and substantially.

### III Inventory

March closing inventory	788,584
April purchases	228,772
Raw Materials	214,783
Containers	13,989
Penta (1408)	(163,760)
Penta (1414)	(112,577)
April material converted to product	215,328
April estimated cost product sold	208,875
April estimated closing inventory	808,481

See attachment for estimated inventory following months.

### IV Sales Forecast

	May	\$ Profit	June	July
FPG Penta	180,000	* 12	200,000	225,000
Customer Penta	94,000	13.5	90,000	90,000
WTC Products	225,000	27	200,000	200,000
KCCA-B	18,000	9	38,000	38,000
KCCA-C	75,000	14	80,000	80,000
Totals	592,000		608,000	633,000

### V. St. Louis Comments

AFE - None this month, still will have approx. \$400 in product line changes for TBTO, CuNap. & Cu8 products.

Employee Status	1980	1979
Salaried	5	4
Hourly	5	5

Medical activity- Last plant employee had physical this month.

TOLS004780

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### New Products

C8 - Recent testing indicates a potential fallout problem with Tenneco C8; we are retesting Seymour and Tenneco material now, with Ventron's material to be tested on arrival. Initial indications are that Tenneco's material may be unfit for our use, thus upsetting our recent cost negotiations with them. These developments are very disappointing in that almost all the inquiries and activity we've had with new products has been with C8 products.

Tribucide - Inquiry today from Webb Manufacturing, Conneaut, Ohio may turn into our first order to TBTO product, millwork usage.

Coppertreat - Activity since Feb. very small, will not even justify the \$4500 inventory we have.

Lumber Coat Conc. -(Dry) - In-house testing yellow product completed; will be able to field trial when small quantity of dissolvable bags arrive in 2 weeks. A little laboratory work remains yet to do on redwood color.

Woodtreat WB - Problems of crystallization of matter in the Troysan raw material is causing severe second thoughts about it. Customer field testing at Caradco, Rantoul, Illinois, disregarding the crystallization problem, were successful at initial customer reaction as far as grain raising is concerned. Further evaluation is being done on paint adherence, drying time, etc. Again, initially we understand that short drying time and very little heat was necessary prior to painting during our trial work in comparison to Woodtox.

There is yet a lack of dissemination of new product information and data to sales personnel in order for them to make good penta clean up and sales presentations.

TOLS004781

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	262,500	269,030
Koppers-Hickson	187,500	188,750
Non-Cam		40,000

Production schedule	May	June	July
Domestic	262,500	300,000	300,000
Koppers-Hickson	187,500	187,500	225,000

Sales Projection			
Domestic	260,000	300,000	300,000
Koppers-Hickson	200,000	200,000	200,000
Non-Cam	40,000	40,000	50,000

Trucking- See Glenn Schultz report and attachment.

Capital expense - none. Still expect \$6000 expenses eductor air duct replacement.  
Medical activity-none, save one routine driver physical exam.

Employee status	1980	1979
Salaried	2	2
Hourly	1	1
Trucking	2	1

### VII Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	241,246	282,085

Shipments	Wickes Forest	
	Utah Wood	2-Exterior Wood
	Dent & Russell	2-Honolulu
	Mc Farland-Cascade	3 Koppers-Hickson
	Koppers Oroville	
	Koppers Ontario	

Production Schedule (Ox Lbs.)	May	June	July
	180,000	150,000	210,000

TOLS004782

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

Sales Projection (Oz. Lbs.)	May	June	July
Honolulu	14,350	-	28,700
Koppers	24,000	24,000	48,000
Licensees	96,000	96,000	96,000
Non-Licensees	24,000	24,000	24,000
	<u>158,350</u>	<u>144,000</u>	<u>196,700</u>

### VIII Travel/Meeting

#### April

Mar 30-Apr 3 - Valparaiso (Schultz vacation)

April 15- 1/2 Day Dow meeting at Clayton

Apr. 22- J. Bretson (Reichhold) to St. Louis

#### May

May 1 & 2 L. Allison air monitoring Valpo

May 9- Valpo

May 12-15 - Newark (Tentative)

May 19-20-Vacation days

R. F. Simmons

RFS/pds

TOLS004783

cc: Janette Wharton  
Frank Klasnick  
Eric Yeadon  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report March 1980

From R. F. Simmons  
Location St. Louis, MO  
Date March 31, 1980

### St. Louis, Missouri Plant & WTC Operations

#### I Shipments March Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtax Preprime Conc.	1 X 55 Gal.
Woodtax 140 RTU	2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	4 X 55 Gal.
Liquid Noxtane I	2 X 55 Gal.
Liquid Azide 200	3 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Lumbrella 33 Clear	11 X 55 Gal.
Lumbrella 33 Clear	189 X 3 Gal.
Lumbrella 15 Yellow	6 X 55 Gal.
Red Orange End Spray 400	5 X 55 Gal.
KLB Beam Sealer	10 X 55 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	6 X 55 Gal.
Liquid Noxtane I	3 X 55 Gal.
Lumbrella 33 Yellow	81 X 3 Gal.
Lumbrella 33 Clear	16 X 55 Gal.
Lumbrella 33 Redwood	2 X 55 Gal.
Lumber Coat Conc. Yellow	10 X 55 Gal.
Red Orange End Spray 400	2 X 55 Gal.
Green End Spray 400	10 X 55 Gal.
Woodtax S Conc.	10 X 55 Gal.
WTC # 71	1 X 515 Lbs.

TOLS004784

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### (4) Newark, California Warehouse

Liquid Noxtane SSI	9 X 345 Gal.
Liquid Noxtane SSI	86 X 55 Gal.
Liquid Azide 200	14 X 55 Gal.
Clear End Sealer	2 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtax Preprime T RTU	60 X 55 Gal.
Woodtax 140 T RTU	1 X 55 Gal.
Woodtax 140 T RTU	1007 Gal. Bulk
Timbertox 40 Conc.	2 X 55 Gal.
WR 340 Conc.	6 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	15963 Gal. Bulk
Woodtax Preprime RTU	12 X 55 Gal.
Woodtax 140 RTU	10 X 55 Gal.
WR 340 Conc.	48 X 400 Lbs.
Penta Wood Pres. RTU	4 X 55 Gal.
Penta Wood Pres. RTU	2 X 5 Gal.
Poletox	125 X 348 Lbs.
Poletox	800 X 57 Lbs.
Tritox	10 X 57 Lbs.
Woodtreat AA	16 X 40 Lbs.
Liquid Noxtane SSI	2 X 55 Gal.
Liquid Noxtane I	4 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
Clear End Sealer	3 X 55 Gal.
Clear End Sealer	4 X 5 Gal.

TOLS004785

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Red End Sealer	1 X 55 Gal.
Red End Sealer	3 X 5 Gal.
Wolman Prestain Redwood Conc	2 X 55 Gal.
Wolman Prestain Redwood Conc.	1 X 5 Gal.
Wolman Prestain Cedar Brown Conc	2 X 55 Gal.
Wolman Prestain Cedar Brown Conc	1 X 5 Gal.
WTC #71	11 X 515 Lbs.
WTC #74	2 X 460 Lbs.
Red Orange End Spray 400	8 X 5 Gal.
Lumbrella 25 Brown	1 X 55 Gal.
Lumbrella 25 Golden Pine	5 X 55 Gal.
Woodtreat C-8 Conc.	4 X 55 Gal.
Woodtreat C-8 RTU	10 X 5 Gal.
Penta Stain #509	5 X 55 Gal.
Poly Kraft Paper	20 Rolls

### Penta Shipments March Calendar Month Lbs.

To	Supplier				Comparison March		
	Reichhold	Vulcan	Dow	WTC	Total	1979	1978
FPG	171,305	85,020*	159,654	-	415,979	449,619	540,098
Customer	110,720	-	121,196*	8,250	240,166	333,175	392,029
WTC	87,750	30,000	-	(8,250)	109,500	-	-
Totals	369,775	115,020*	280,850	-	765,645	782,794	932,127

\* approximate

### March Accounting Month Invoicing \$

	\$ Profit	1980	1979	1978
FPG Penta	13.7	232,831	191,193	222,477
Customer Penta	14.4	67,525	94,981	77,864
WTC Products	27.5	224,802	184,905	222,726
KCCA-C	15.6	122,950	32,377	-
KCCA-B	10.4	52,784	-	-
		700,892	503,456	521,860

TOLS004786

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### II Materials

Penta - We have entered our first order for Dow penta shipping out of their West Coast warehouse at .56 less 10%. Judging by the length of time necessary to get our first t/l of Dowicide GST from Dow, our lead time is going to have to be at least 2 months. Reichhold not accepting export orders for penta prills until at least the last quarter of 1980. New International Maritime regulations are in the works for shipments of penta even in block forms that no suppliers are willing to ship penta until final definition of the rules are out. Supplies of bagged prilled penta will remain tight through the summer.

Solvents. - New pricing on mineral spirits east of the rockies effective 5/1/80 increase of .06 Gal. West Coast Rule 66 LEP mineral spirits now 1.25 gallon to Portland, but material still non-existent. Petroset II increases middle of the month of 1.18 gallon increase. Stocking in Portland 20 drums at old price for J. H. Baxter use. St. Louis Isopropanol up \$.25 Gal. Ethylene Glycol up .025 Lb. Most aromatic solvents up .15 gal. Chevron is discontinuing fuel oil for the koppers Plants at Gainesville, FL and Florence, S.C. and we are assisting Dan Davies and Paul Goydan in obtaining solvent & co-solvent for them. Pigment Increases in range of about .15 Lb. average. Lithium Hydroxide up .08 Lb. Drums will increase about 8%.

### III Inventory

February closing inventory	761,434
March Purchases	169,967
Raw Materials	164,783
Containers	5,184
Penta 1408	(200,073)
Penta 1414	(20,067)
March material converted to product	133,858
March estimated cost product sold	189,058
March estimated closing inventory	742,343
April estimated closing inventory	750,000
May estimated closing inventory	735,000
June estimated closing inventory	725,000

TOLS004787

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### IV Sales Forecast

	<u>April</u>	<u>\$Profit</u>	<u>May</u>	<u>June</u>
FPG Penta	225,000	13.8	250,000	225,000
Customer Penta	106,000	15	100,000	100,000
WTC Products	200,000	21	225,000	225,000
K-CCA-B	37,000	28	58,000	58,000
K-CCA-C	100,000	20	120,000	120,000
Totals	668,000		753,000	728,000

### V. St. Louis Comments

AFE \$4000 estimated cost TBTO & Cu lines

<u>Employee Status</u>	<u>1980</u>	<u>1979</u>
Salaried	5	4
Hourly	5	5

Medical activity- Three hourly employees annual physical in March. One more in April. All three checkup in March good reports.

Dry pigment samples received in other colors than yellow for Lumber Coat Conc. new formula, and now undergoing testing. Dissolvable bags are also in testing and we are looking at blending and packaging needs. Expect to have samples for field trial of product within 2 weeks.

### VI Valparaiso Mix Plant

<u>Oxide Lbs.</u>		<u>Produced</u>	<u>Shipped</u>
Domestic		412,500	403,215
Koppers-Hickson		187,500	207,145
Non Com		-	40,000
<u>Inventory</u>	<u>March</u>	<u>184,317</u>	
	April	210,000	
	May	250,000	
	June	289,000	

TOLS004788

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### Production Schedule

	<u>Apr.</u>	<u>May</u>	<u>June</u>
Domestic	262,500	262,500	375,000
Koppers Hickson	150,000	150,000	225,000

### Sales Projection

Domestic	240,000	300,000	360,000
Koppers Hickson	140,000	180,000	200,000
Non-Com	40,000	80,000	40,000

Trucking - See G. Schultz report.

Capital Expense - None.

AFE-\$6000 kettle eductor air duct replacement in works.

Medical activity- none.

### Employee Status:

	<u>1980</u>	<u>1979</u>
Salaried	2	2
Hourly	1	1
Trucking	2	1
	5	4

### VII Newark Mix Plant

Oxide Lbs.	<u>Produced</u> 185,858	<u>Shipped</u> 160,195
------------	----------------------------	---------------------------

### Shipments:

Honolulu	4 containers	Koppers Ontario
Exterior Wood		Selma
Wickes		

### Inventory

March	402,635
April	350,000
May	300,000
June	264,200

TOLS004789

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-7-

Production Schedule	Apr 300,000	May 300,000	June 210,000
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### Sales Projection

Honolulu	28700	28,700	28,700
Koppers	48,000	24,000	48,000
Licensees	159,300	200,000	120,000
Non-Licensees	24,000	24,000	24,000

### VIII Travel/Meeting

Mar 6 & 7 L. Allison at St. Louis  
Mar 11 Staff Meeting at Pittsburgh  
Mar. 18 Ciba-Gesy  
Mar. 20 Transchemical  
Mar 25. Nalco Chemical  
Mar 30-Apr. 3 Valpo (Schultz vacation)  
Apr 15 Dow Meeting  
Apr 21-25 Newark, Ca. & Portland, OR

R. F. Simmons

RFS/pds

TOLS004790

# KOPPERS

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report February 1980

From R. F. Simmons  
Location St. Louis, MO.  
Date February 29, 1980

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments February Accounting Month

##### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	9 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.
Woodtox Preprime RTU	5 X 55 Gal.
Woodtox 140 Conc.	1 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Yellow	1 X 55 Gal.
Lumbrella 25 Brown	2 X 55 Gal.
Lumbrella 33 Clear	2 X 55 Gal.
Lumbrella 33 Redwood	10 X 55 Gal.
Lumbrella 33 Cherry Tone	24 X 55 Gal.
Liquid Noxtane SSI	4 X 55 Gal.
End Spray 400 Green	12 X 5 Gal.
End Spray 400 Red	16 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	12 X 55 Gal.
Lumber Coat Conc. Yellow	54 X 3 Gal.
Lumber Coat Conc. Yellow	1 X 55 Gal.
Lumbrella 33 Yellow S	27 X 3 Gal.
Lumbrella 33 Clear	6 X 55 Gal.
End Spray 400 Red	3 X 55 Gal.
End Spray 400 Red/Orange	3 X 55 Gal.
End Spray 400 Green	2 X 55 Gal.
End Spray 400 Blue	1 X 55 Gal.

TOLS004791

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SS1	2 X 345 Gal.
Liquid Azide 200	1 X 55 Gal.
Clear End Sealer	4 X 300 Gal.
Clear End Sealer	4 X 55 Gal.
Orange End Sealer	2 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtax Preprime T RTB	13850 Gal. Bulk
Woodtax Preprime T RTU	20 X 55 Gal.
Woodtax 140 T Conc.	30 X 55 Gal.
Woodtax 140 T RTU	10 X 55 Gal.
Timbertox 40 Conc.	24 X 55 Gal.
Petrosset II	16 X 455 Lbs.
Redy Coat Penta Conc.	14 X 55 Gal.
Redy Coat Penta RTU	14 X 55 Gal.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	54021 Gal. Bulk
Woodtax Preprime RTU	5 X 55 Gal.
Woodtax Preprime Conc.	4005 Gal. Bulk
Woodtax 140 RTU	4475 Gal. Bulk
Woodtax 140 RTU	1 X 55 Gal.
Woodtax RTU	1 X 55 Gal
Woodtax RTU	1 X 5 Gal.
Penta Wood Pres. Conc.	4194 Gal. Bulk
Penta Wood Pres. Conc.	78 X 55 Gal.
Wolman Prestain Cedar Brown	2 X 5 Gal.
Lumbrella 33 Yellow	52 X 55 Gal.

TOLS004792

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-3-

Lumbrella 33 Yellow	52 X 55 Gal.
Liquid Noxtane SSI	19 X 55 Gal.
WTC #71	8 X 515 Lbs.
KLB Beam Sealer	3 X 55 Gal.
Wood Seal Wax	50 X 40 Lbs.
Wood Seal Wax	1 X 426 Lbs.
Clear End Sealer	1 X 53 Gal.
Blue End Sealer	2 X 5 Gal.
End Spray 400 Green	8 X 5 Gal.
End Spray 400 Red/Orange	2 X 5 Gal.
Penta Stain #502	6 X 55 Gal.
Penta Stain #504	1 X 55 Gal.
Penta Stain #505	1 X 55 Gal.
Penta Stain #506	6 X 55 Gal.
Penta Stain #506	20 X 5 Gal.
Penta Stain #509	5 X 55 Gal.
Woodtreat AA	2 X 50 Lbs.
Penta Check	1 Pt.

### Penta Shipments February Calendar Month Lbs.

to	Supplier	Comparison Feb.					
		1979	1978	1979	1978	1979	1978
FPG	Reichhold	98,080	-	240,242	-	338,322	448,344
Customer		12,130	-	38,720	32,050	82,900	211,950
WTC		13,570	-	-	(32,050)	(18,480)	44,660
Totals		123,780	-	278,962	-	402,742	704,954
							714,284

### February Accounting Month Invoicing \$

	% Profit	1980	1979	1978
FPG Penta	13.3	227,584	235,135	116,641
Customer Penta	17.7	41,997	61,706	92,592
WTC Products	21.8	275,410	170,715	195,914
K-CCA-C	20	125,922	59,922	0
K-CCA-B	16	35,192	0	0
Totals		707,105	527,369	405,147

\* less credits

TOLS004793

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### II Materials

Penta - First bulk available from Reichhold finally scheduled to Crown Zellerbach , Gulfport; we are to get one T/L from next shipment also, due to arrive Pine Bluff about April 1. Prilled penta remains in very short supply in spite of low demand indicating troubles ahead for spring.

Solvents - W should finally have mineral spirits to Portland about March 7, while the entire Wes Coast remains in very tight supply. We are also working to secure supply for Honolulu Wood, at their request.

### III Inventory

#### January closing inventory

780,931

#### February purchases

189,209

Raw Materials 180,245

Containers 8,964

Penta (1408) (243,441)

Penta (1414) ( 39,530)

#### February material converted to product

172,846

#### February estimated cost products sold

233,808

#### February estimated closing inventory

736,330

#### March estimated closing inventory

690,000

#### April estimated closing inventory

675,000

#### May estimated closing inventory

660,000

### IV Sales Forecast

	March	\$ Profit	April	May
FPG Penta	190,000	14.5	180,000	180,000
Customer Penta	55,000	15	90,000	90,000
WTC Products	175,000	24	150,000	150,000
K-CCA-B	54,000	16	54,000	54,000
K-CCA-C	54,000	20	81,000	81,000
Totals	528,000		555,000	555,000

TOLS004794

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### V. St. Louis Comments

AFE - \$4000 anticipated costs March for TBTO & Cu product line changes

Employee Status	1980	1979
Salaried	5	4
Hourly	5	5

No medical activity in February. Yearly checkups are already scheduled for 4 hourly employees in March. Other employee was tested in October 1979, will reschedule later in the year.

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	337,500	266,560
Koppers-Hickson	187,500	165,780

Inventory	Feb.	213,712
	Mar.	240,000
	Apr.	220,000
	May	240,000

Production Schedule	Mar.	Apr.	May.
Domestic	262,500	262,500	300,000
Koppers-Hickson	150,000	187,500	187,500

Sales Projection	Domestic	280,000	260,000	300,000
	Koppers-Hickson	160,000	180,000	180,000

Trucking-See G. Schultz report

Capital Expense - none

AFE- In works \$6000 kettle eductor air duct replacement.

Medical activity - none.

TOLS004795

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Employee Status	1980	1979
Salaried	2	2
Hourly	1	1
Trucking	2	1
	5	4

### VII Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	62,000	52,595

Shipments 2 containers Honolulu Wood  
1 T/L Wickes-Elimira CA

Inventory	Feb.	342,116 + 2394 Supplies
	Mar.	50,000
	Apr.	400,000
	May	400,000

Production Schedule	Mar	Apr.	May
	210,000	210,000	180,000
Sales Projection			
Honolulu	57,000	57,000	57,000
Koppers	24,000	48,000	24,000
Licensees	96,000	72,000	72,000
Non-Licensees	24,000	24,000	24,000

### VIII Travel/Meetings

Feb. 13 - At Valpo with Klasnick  
Feb. 14 & 15 - Klasnick at St. Louis  
Feb. 26 & 27 - Klasnick at St. Louis  
Feb. 28 - C. Lindauer  
Feb. 28 - P. S. Martin, M. L. Farrell, D. Nether, L. Knapp-Dow at St. Louis  
March 6-7 L. Allison to St. Louis  
March 11 - Staff Meeting Pittsburgh  
March 17 (part of week) Newark  
March 31-April 13-Valpo (Schultz vacation)

R. F. Simmons

TOLS004796

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report January 1980

From R. F. Simmons  
Location St. Louis, MO  
Date January 31, 1980

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments January Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	2 X 55 Gal.
Woodtox 140 Conc.	4 X 55 Gal.
Penta Wood Pres. Conc.	4 X 5 Gal.

##### (2) Enfield, North Carolina Warehouse

KLB Beam Sealer	10 X 55 Gal.
Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Clear	2 X 55 Gal.
Lumbrella 33 Redwood	2 X 55 Gal.
Liquid Noxtane I	3 X 55 Gal.
Green End Spray 400	10 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Lumber Coat Conc. Yellow	5 X 55 Gal.
Lumbrella 33 Clear	3 X 55 Gal.
Green End Spray 400	1 X 55 Gal.
Red Orange End Spray 400	3 X 55 Gal.

##### (4) Newark, California Warehouse

Liquid Noxtane SST	50 X 55 Gal.
Pallets	12 Ea.

TOLS004797

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### (5) Portland, Oregon Blender

Woodtax Preprime T RTU	6963 Gal. Bulk
Woodtax Preprime T RTU	80 X 55 Gal.
Woodtax 140 T Conc.	60 X 55 Gal.
Timbertox 40 Conc.	10 X 55 Gal.
WR 340 Conc.	12 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	8556 Gal. Bulk
Woodtax Preprime RTU	7 X 55 Gal.
Woodtax Preprime Conc.	1 X 5 Gal.
Woodtax 140 RTU	2003 Gal. Bulk
Woodtax 140 RTU	20 X 55 Gal.
Penta Wood Pres. Conc.	21 X 55 Gal.
Poletox	18 X 348 Lbs.
Liquid Noxtane SST	52 X 55 Gal.
Liquid Noxtane I	6 X 55 Gal.
Lumbrella 33 Golden Pine	5 X 55 Gal.
Lumbrella 33 Yellow Hard	1 X 55 Gal.
Red Orange End Spray 400	3 X 5 Gal.
Clear End Sealer	2 X 53 Gal.
WTC #71 Floc. Agent	2 X 515 Lbs.
Anstrik 50 Conc. Blue	1 X 5 Gal.
Penta Stain #501	1 X 5 Gal.
Penta Stain #502	6 X 55 Gal.
Penta Stain #502	6 X 5 Gal.
Penta Stain #505	2 X 5 Gal.
Penta Stain #506	4 X 55 Gal.
Penta Stain #506	2 X 5 Gal.
Penta Stain #508	5 X 5 Gal.
Penta Check	2 Qts.
Penta Tratton	2 Lbs.

TOLS004798

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-2-

### Penta Shipments January Calendar Month Lbs.

To	Supplier				Total	Comparison Jan.	
	Reichhold	Vulcan	Dow	WTC		1979	1978
FPG	129,130	*81,440	282,895	-	493,465	363,136	260,927
Customer	131,800	-	86,884	4,500	223,184	175,119	187,500
WTC	64,750	-	-	(4,500)	60,250	186,526	-
Totals	325,680	81,440	369,779	-	776,899	724,781	448,427
*approx.							

### January Accounting Month Invoicing \$

	\$ Profit	1980	1979	1978
FPG Penta	12.47	230,469	148,593	142,870
Customer Penta	15.33	122,064	113,433	49,785
WTC Products	22	123,480	125,850	131,328
K-CCA-C	20	48,725	-	-
K-CCA-B	16	34,394	-	-
Totals		559,133	387,876	323,983

### II Materials

Penta - Our impression is that Vulcan may hold off price increasing indefinitely. One bulk car shipped from Reichhold at Tacoma to Pine Bluff January 7; we await confirmation from J. Odum that we will be able to secure some of this before calling customers. Reichhold is having production problems. Bagged prills remain in relatively short supply; we are concerned when the spring order surge arrives.

Solvents - There have been more January increases although not as severe as those at year-end; we do expect all solvents and particularly mineral spirits to be scarce most of the year and raise in cost at least 10% per quarter for the year. Mineral spirits on the west coast are almost non-existent; our first movement of spirits from the mid-west should arrive at Portland mid-February and we expect no problem selling product in spite of \$1.50/gal. cost spirits.

TOLS004799

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
Location \_\_\_\_\_ Location \_\_\_\_\_  
Subject \_\_\_\_\_ Date \_\_\_\_\_

-4-

### III. Inventory

December closing inventory	706,597
January purchases	159,339
Raw Materials	148,714
Containers	10,625
Penta (1408)	(193,300)
Penta (1414)	(77,472)
January material converted to product	56,590
January estimated cost products sold	100,000
January estimated closing inventory	765,936
February estimated closing inventory	700,000
March estimated closing inventory	660,000
April estimated closing inventory	625,000

### IV. Sales Forecast

	<u>Feb.</u>	<u>\$ Profit</u>	<u>Mar.</u>	<u>Apr.</u>
FPG Penta	184,000	14.5	200,000	150,000
Customer Penta	84,000	15.2	100,000	125,000
WTC Products	175,000	24	175,000	200,000
K-CCA-B	18,500	16	37,000	37,000
K-CCA-C	122,000	20	82,000	122,000
Totals	583,500		594,000	634,000

### V. St. Louis Comments

No AFE's. No capital expenses.

Employee status	<u>1980</u>	<u>1979</u>
Salaried	5	4
Hourly	5	6

No medical activity in January. Will schedule check-ups for plant personnel at end of February for yearly physical.

TOLS004800

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-5-

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	187,500	226,260
Koppers Hickson	150,000	144,585
	337,500	370,845

Inventory	Jan	176,319
	Feb.	180,000
	Mar.	180,000
	Apr.	200,000

Medical - No activity.

Production Schedule	Feb.	Mar.	Apr.
Domestic	187,500	225,000	262,500
Koppers Hickson	150,000	187,500	187,500

Sales Projection			
Domestic	200,000	200,000	240,000
Koppers Hickson	150,000	180,000	180,000

Trucking- See G. Schultz report.

Capital Expense  
Close 4210-5056-893 Total expense \$17,386.  
There are no other Valpo appropriations.

Employee Status	1980	1979
Salaried	2	2
Hourly	1	1
Trucking	2	1

TOLS004801

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-<sup>1</sup>

### VII Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	157,363	150,425

#### Shipments

Exterior	Selma
Utah	K-Ontario
Honolulu 2 containers	K-Oroville

Inventory	Jan.	Feb.	Mar.	Apr.
	180,954 (+4438 container)			
	Feb. 180,000			
	Mar. 185,000			
	Apr. 200,000			

#### Production Schedule

	Feb.	Mar.	Apr.
	150,000	240,000	240,000

#### Sales Projection

Honolulu	28,700	57,400	57,400
Koppers	20,000	40,000	40,000
Licensees	72,000	96,000	120,000
Non-Licensees	0	24,000	24,000

### VIII Meetings/Travel

Jan 14 - P. Goydan at St. Louis  
Jan 14/15 B. Baldwin at St. Louis  
Feb. 1 Vacation day  
Feb. 6-8 F. Klasnick St. Louis & Valpo tentative  
Feb. 13-16 Newark & Portland  
Feb. 29 Pittsburgh Div. Staff Meeting

R. F. Simmons

RFS/pds

TOLS004802

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K-1001  
 Subject January Expenses

From R. F. Simmons  
 Location St. Louis, MO  
 Date January 31, 1980

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	12,561	3,845	4,012	
Office Expenses	1,012	1,241		
Travel Expenses		36	731	
M&R	132	50		
Direct Supply	640	941	8,076	8,623
Fuel & Power	4,748	3,061		
Indirect Expense	772		10	383
Consult & Prof Svc	200			
Sub. Dues & Donations	94	170		
Depreciation	1,843	5,300	1,841	
Ins/Taxes	4,292	1,540	346	103
Misc Expense			34	3,691
Misc Income				
Whse	5,962			
Pumps	330			
AFE Expense	17,210			
Total Expense	32,586	33,428	18,707	9,099
Absorbed	12,607	28,618	13,283	16,281
Feb. Expense	28,000	23,500	14,000	11,500
Absorbed	22,000	20,000	13,280	15,545
Mar Expense	26,000	22,000	14,000	13,000
Absorbed	24,000	25,000	16,500	25,095
Apr. Expense	26,000	22,000	14,000	13,000
Absorbed	24,000	25,000	18,000	25,095

R. F. Simmons

RFS/pds

TOLS004803

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K-1001  
 Subject December Expenses

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date January 4, 1980

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	17,977	4,872	6,532	
Office Expenses	1,863	1,161		
Travel Expenses	355	161	1,073	
M & R	250	578	2,390	
Direct Supply	(847)	330	10,690	12,302
Fuel & Power	328	1,213		
Indirect Expense	351	1,949	90	
Consult & Prof. Svcs	175			
Sub. Dues & Donations				
Depreciation	1,834	5,300	1,841	
Ins/Taxes	4,742	1,523	231	103
Misc Expense	285	(353)		174
Misc Income				
Whee 170/390/395	9,264			
Pumps				
AFE Expense			1,258	
Total Expense	36,567	16,734	24,105	12,579
Absorbed	23,684	14,757	26,489	22,537
Jan. Expense	24,000	14,000	21,000	11,500
Absorbed	16,000	14,100	22,000	16,000
Feb. Expense	22,000	14,500	24,000	11,500
Absorbed	18,000	15,675	25,000	16,000
Mar Expense	24,000	15,000	24,000	13,000
Absorbed	22,000	18,800	26,500	19,200

R. F. Simmons

RFS/pds

TOLS004804

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, MO.

Subject Monthly Report December 1979

Date January 4, 1980

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments December Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtax Preprime RTU	1 X 55 Gal.
Woodtax RTU	11 X 55 Gal.
Woodtax 140 RTU	10 X 55 Gal.
Penta Stain #509	2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 33 Redwood	6 X 55 Gal.
Lumbrella 33 Redwood	54 X 3 Gal.
Lumbrella 33 Clear	1 X 55 Gal.
Lumbrella 33 Clear	27 X 3 Gal.
Lumbrella 33 Yellow	54 X 3 Gal.
Lumbercoat Conc.	1 X 55 Gal.
Red Orange End Spray 400	4 X 55 Gal.
Green End Spray 400	15 X 5 Gal.
Yellow End Spray 400	10 X 25 Gal.

##### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	16 X 55 Gal.
Lumbrella 33 Redwood	8 X 55 Gal.
Lumbrella 33 Yellow	27 X 3 Gal.
Red Orange End Spray 400	7 X 55 Gal.
Liquid Noxtane SS1	12 X 55 Gal.
Liquid Noxtane 1	13 X 55 Gal.
Timbertreat 625	4 X 55 Gal.

TOLS004805

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	6 X 345 Gal.
Liquid Noxtane SSI	45 X 55 Gal.
Liquid Azide 200	1 X 55 Gal.
Clear End Sealer	2 X 55 Gal.

### (5) Portland, Oregon Blender

Rdry Coat Penta RTU	42 X 55 Gal.
Rdry Coat Penta Conc.	14 X 55 Gal.
Woodtax 140 T Conc.	3 X 55 Gal.
Woodtax 140 T RTU	7898 Gal. Bulk
WR 340 Conc.	18 X 408 Lbs.
Petroset II	6 X 460 Lbs.
Timbertox 40 Conc.	1 X 55 Gal.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	10058 Gal. Bulk
Woodtax Preprime RTU	5 X 55 Gal.
Woodtax Preprime Conc.	5 X 55 Gal.
Woodtax 140 Conc.	20 X 55 Gal.
Woodtax 140 RTU	6 X 55 Gal.
Woodtax S Conc.	10 X 55 Gal.
Woodset 310	1 X 55 Gal.
Penta Wood Pres. Conc.	5 X 55 Gal.
Penta Wood Pres. Conc.	1 X 5 Gal.
Coppertreat 00	1 X 55 Gal.
WTC #71	12 X 515 Lbs.
Timbertreat 625	2 X 55 Gal.
Liquid Noxtane SSI	1 X 55 Gal.
Liquid Noxtane I	2 X 55 Gal.
Lumbrella 25 Cherry Tone	50 X 55 Gal.
Lumbrella 33 Redwood Soft	26 X 55 Gal.
Lumbrella 33 Yellow	54 X 3 Gal.
Lumbrella 33 Clear	162 X 3 Gal.

TOLS004806

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Clear End Sealer	1 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
Penta Stain #509	3 X 55 Gal.
Green End Spray	1 X 5 Gal.
Polelife TF	10 X 45 Lbs.
Polelife Tags	500 Ea.

### Penta Shipments December Calendar Month Lbs.

To	Supplier	Comparison Dec.			
		1978	1977		
FPG	Reichhold	97640	42000	285480	0
Customer		43085	0	(128233*)	94000
WTC		108975	37100	0	(94000)
Totals		248975	79100	285480	0
				51350	51350
				100	100
				613555	613555
				650089	633215

\*Not included in totals; Replacement on Nov. shipments rejected. See comments on Dow penta in material section.

### December Accounting Month Invoicing \$

	\$ Profit	1979	1978	1977
FPG Penta	15.0	171611	271348	155338
Customer Penta	14.75	96975	44624	140014
WTC Products	18.70	158125	149902	172492
K-CCA-C	14.00	108590	-	-
K-CCA-B	16.000	50707	-	-
Totals		586008	465874	454689

### II. Materials

Penta - Reichhold & Dow penta priced at .56 Lb. January 1; Vulcan holding at .53 without increasing. Dow remains unable to provide customer acceptable 1000 lb. blocks - shipments made to Walker Williams and Escambia-Brunswick in November had to be replaced with 2000 lb. blocks because fiber pac containers could not be stripped. There is no progress in sight in solving the problem. Reichhold production somewhat low also; no bulk available at Pine Bluff yet, but promised about Feb. 1.

Solvents - Increases again January 1 averaged about 10¢ gallon. Mineral spirits on the west coast remain in extremely short supply for the third month, causing us to solicit no new business.

TOLS004807

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-4-

### III. Inventory

	Book 592505	Inventory 678038
November closing inventory		153414
December purchases		
Raw Materials	149094	
Containers	4320	
Penta 1408	(105464)	
Penta 1414	(18636)	
December material converted to product		157818
December estimated cost products sold		128500
December estimated closing inventory		702952
January estimated closing inventory		675000
February estimated closing inventory		655000
March estimated closing inventory		640000

### IV. Sales Forecast

	Jan.	% Profit	Feb.	Mar.
FPG Penta	185000	13.5	200000	250000
Customer Penta	115000	15	150000	180000
WTC Products	125000	20	150000	200000
K-CCA-B	18000	17	54000	36000
K-CCA-C	21000	15	42000	105000
Totals	464000		596000	771000

### V. St. Louis Comments

No AFE's No capital expenses

Employee status	1979	1978
Salaried	5	4
Hourly	5	7

No medical activity in December.

TOLS004808

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-3-

### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	187500	227058
Koppers Hickson	181000	165520

Inventory	Dec.	Jan.	Feb.	Mar.
	127868	165000	155000	170000

Medical - Schultz & Kent had 6 months physicals.

Production schedule	Jan.	Feb.	Mar.
Domestic	187500	225000	262500
Koppers Hickson	150000	150000	187500

Sales Projection	200000	220000	260000
Domestic	200000	220000	260000
Koppers Hickson	140000	120000	180000

Trucking - See G. Schultz December report.

### Capital Expenses

As reported last month \$1258.43 expense this month 4210-5029-899 to close this appropriation.

Next month 4210-5056-893 will be completed with \$17,210 expected expenditures.

Employee status	1979	1978
Salaried	2	2
Hourly	1	1
Trucking	2	1

TOLS004809

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### VII. Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	195,326	295,400

#### Shipments

Honolulu 7 containers

Wickes-Elmira

Koppers Ontario

McFarland- Cascade

Selma

Pacific - Ridgefield 2

Kellogg

Pacific Bakersfield

#### Production Schedule

	Jan.	Feb.	Mar.
160,000	160,000	192,000	

#### Sales Projection

Honolulu

28,700	28,700	57,400
--------	--------	--------

Koppers

0	24,000	24,000
---	--------	--------

Licensees

24,000	120,000	120,000
--------	---------	---------

### VIII. Meetings Travel

Dec. 13 St. Louis Salaried employees benefits program dinner

Dec. 24 afternoon Christmas party-all employees.

Dec. 26, 27 & Jan 2 - vacation days

Jan. 9 Messieurs Hite, Hallahan at St. Louis

Jan 10 or 11 -Valparaiso

Jan. 30 - Feb. 1 - Newark, Portland

R. F. Simmons

RFS/pds

TOLS004810

Koppers Company, Inc., Wood Treating Chemicals Department  
5137 Southwest Ave., St. Louis, MO 63110  
Telephone 314-772-2200

# KOPPERS

October 7, 1981

Mr. Neil Gallagher  
TIME OIL COMPANY  
P.O. Box 3117  
12005 N. Burgard  
St. Johns Station  
Portland, Oregon 97203

Dear Neil:

Attached are the formulation changes for:

WOODTOX PRE-PRIME - T READY-TO-USE  
WOODTOX PRE-PRIME - T CONCENTRATE

Please replace in your formulation book and destroy the present formula.

Please acknowledge the bottom of this letter and return to my attention when this has been completed.

Again, if you have any questions, please let me know.

Sincerely yours,

John D. Palmer  
Production Manager

/pa

Attachments

cc: Mr. Ken Cogan - Conley, GA

TOLS004811

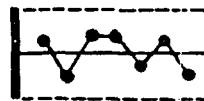
BZTO104(e)041632



# WOOD TREATING CHEMICALS DEPT.

KOPPERS COMPANY, INC.

5137 SOUTHWEST AVENUE, ST. LOUIS, MISSOURI 63110



## CONFIDENTIAL FORMULA RECORD

Product Woodtox Pre-Prime RTU - T Lab. Book No. \_\_\_\_\_ Date September 20, 1981  
Made for Portland, Oregon (Time Oil) Chemist G. B. Mills

POUNDS	GALLONS	MATERIAL	POUNDS PER GAL.	COST PER UNIT	EXTENSION	%
5.20	.335	Penta	15.54			
0.75	.100	Paraffin Wax	7.5			
15.00	2.098	Oxo Bottoms	7.15			
0.50	.063	Nalco 6SJ 743 (6RJ 947)	7.9			
78.55	12.048	Mineral Spirits (Quick Dry)	6.52			
100.0	14.644		6.829			

DILUTION: ONE TO \_\_\_\_\_ DILUENT \_\_\_\_\_ IBS. PER GAL. \_\_\_\_\_

REMARKS:

1. Charge Blender with oxo bottoms Nalco and 1/3 of the mineral spirits.
2. Heat to 170°F and agitate while adding wax and penta
3. Continue mixing until dissolved but heat and add remaining mineral spirits and mix unhomogenous.
4. Mail sample to St. Louis.

1000 gallon batch	
#	gallon
360	
52	
1024	143
34	4.3
5364	823

Penta  
Wax  
Oxo  
Nalco  
Mineral Spirits

TOLS004812

DISTRIBUTION: Sales Dept. .... Tech. Svc. .... Plant Mgr. .... Plant .... Office Mgr. ....  
Purch. .... Safe File .... Lab Group .... Other ....

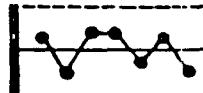
BZTO104(e)041633



# WOOD TREATING CHEMICALS DEPT.

KOPPERS COMPANY, INC.

5137 SOUTHWEST AVENUE, ST. LOUIS, MISSOURI 63110



## CONFIDENTIAL FORMULA RECORD

Product Woodtox Preprime Conc. T Lab. Book No. \_\_\_\_\_ Date September 20, 1981

Made for Time - Portland, Oregon Chemist G. B. Mills

POUNDS	GALLONS	MATERIAL	POUNDS PER GAL	COST PER UNIT	EXTENSION	%
22.50	1.448	Penta	15.54			
3.25	.433	125 mp Paraffin Wax	7.5			
64.95	9.122	Oxo Bottoms	7.15			
4.00	.545	KB-3	7.34			
2.00	.253	Nalco 6SJ 743	7.9			
3.30	.506	Mineral Spirits (#Quick Dry)	6.52			
100.0	12.307		8.13			

DILUTION: ONE TO \_\_\_\_\_ DILUENT \_\_\_\_\_ LBS. PER GAL. \_\_\_\_\_

REMARKS:

### Blending Procedures

1. Meter in oxo bottoms, KB-3, and mineral spirits and Nalco
2. Heat to 180°F and circulate
3. Add wax and penta and continue circulation until completely dissolved.
4. Sample and sent to St. Louis.

### 1000 gallon batch

#	gallon	
1829		Penta
264		Wax
5280	728.5	Oxo Bottoms
325	45	KB-3
162.6	20.5	Nalco
268	41	Mineral Spirits

TOLS004813

DISTRIBUTION: Sales Dept. .... Tech. Svc. .... Plant Mgr. .... Plant ..... Office Mgr. ....  
Purch. .... Safe File .... Lab Group .... Other ....

cc: Don Marion K/800  
Paul Goydan K/1001

# KOPPERS

## Interoffice Correspondence

To Ken Cogan  
Location Conley, GA  
Subject Your 10-12-81 Memo  
on TIME OIL

From John Palmer  
Location St. Louis  
Date October 23, 1981

1. In regards to your first question, we are not aware of any item blended that was not specifically covered in the agreement or in the amended schedule.
2. George Mills is reviewing the written instructions as they regard to manufacturing. I have reviewed with Andy Anderson the instructions as to the safe handling of the materials. He said to use our safety pages from the ACCIDENT PREVENTION PROGRAM GUIDEBOOK. Those pertinent parts are copied for your approval. (Attached)
3. TIME OIL does not have any hazardous waste at the present time. They do have some tanks that haven't been cleaned out in years and they do need to be cleaned.
4. As discussed with you earlier, Neil Gallagher of TIME informed me that the complaints occur after taking the mask off.

The masks used are WILSON FULL FACE masks with R-21 filters and R-10 dust filters. These were recommended to Neil by Bob Simmons.

5. I am still reviewing the JONES-HAMILTON instructions - some of which (CCA) are attached. These were written in 1976-77.

John D. Palmer

JDP/pa

TOLS004814

Koppers Company, Inc., Wood Treating Chemicals Department  
5137 Southwest Ave., St. Louis, MO 63110  
Telephone 314-772-2200

# KOPPERS

October 9, 1981

Mr. Neil Gallagher  
Time Oil Co.  
Portland, Oregon

Dear Neil:

Attached is the American Forest Products Co. - Prineville, Oregon order as discussed with Kathy this date. Please ship - Federal Express if not already done so, a sample of the corrected Woodtox IIPreprime solution for testing to St. Louis. Do not ship until we have released.

Again, thank you for your assistance.

Sincerely yours,

John Palmer  
Operations Manager  
JDP/pa

TOLS004815

BZTO104(e)041636

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbruster  
 Ken Cogan  
 Mary Ann Sinyth

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons / J.D. Palmer

Location K/1001

Location St. Louis, Missouri

Subject Monthly Report - April 1981

Date April 29, 1981

### I. St. Louis, Missouri Plant & WTC Operations

#### Shipments April Accounting Month

1. Atlanta, Georgia Warehouse	\$ 12658
2. Enfield, North Carolina Warehouse	21358
3. Newark, CA Warehouse	23486
4. St. Louis, Missouri Warehouse	185539
5. Portland, Oregon Warehouse	<u>25339</u>
	\$268380

#### Penta Shipments April Calendar Month Lbs.

To.	Reichhold	Vulcan	WTC	Totals	1980	1979
FPG	373076			373076	498336	426289
Customer	85090		13500	98590	157769	142995
WTC	<u>73500</u>	<u>32244</u>	(13500)	<u>92244</u>	<u>(40600)</u>	<u>104000</u>
	531666	32244	-----	563910	614505	673284

#### Invoicing April Accounting Month \$

	% Profit	1981	1980	1979
FPG Penta	15.2	166741	254205	91728
Customer Penta	13.2	56070	91637	137766
WTC	25.0	268380	286130	298975
KCCA-E	24.7	249269	88744	54652
KCCA-B	<u>21.0</u>	<u>42741</u>	<u>34677</u>	<u>60002</u>
Totals		783201	755393	643123

### II. Materials

All Ketone Bottoms, all cosolvents are in tight supply. Petroleum products are continuing to increase. Mineral Spirits costs are \$1.58/gallon. Pigments CIBA-GEIGY is discontinuing some water dispersed pigments, including those used in Redwood, Yellow Lumbrella 33. We have some in stock, and working with the lab for alternative products.

TOLS004816

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

April 29, 1981

Page 2

### III. Inventory

April Closing Inventory	760255
April Purchases	268962
Raw Materials	259475
Containers	9487
Penta 1408	(141597)
Penta 1414	(18149)
April Material Converted to Product	199281
April Cost Product sold (Est)	201000
April Closing Inv. (Est)	828000
Reserve	2185

### IV. Sales Forecast

	May-			
	April	% Profit	June	July
FPG Penta	160	15.0	200	200
Customer Penta	28	15.0	50	25
WTC	250	25.1	240	270
KCCA-C	200	23.0	300	330
KCCA-B	42	21.3	45	45
	680		835	870

### V. St. Louis Comments

No Capital Expenditures.

All of the men have completed their annual physical exam this month. There were no adverse comments. The Auditors completed their audit the week of March 23. Audit reply has been sent to you and Mary Ann.

Visitors this month have included:

March 23-27	Internal Auditors
March 24	Richard Spatz
March 30 - April 1	RFS at Valpo
April 7	Mary Ann Marino
April 9	J. D. Hite
April 14	Bill Baldwin and Glenn Schultz
April 29-May 2	RFS & PS to Valpo

TOLS004817

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 3

Two batches of Woodtreat WB Conc. have been produced:

### VI. Valparaiso Mix Plant

CCA Oxide lbs.	<u>Produced</u>	<u>Shipped</u>
Koppers	243000	245780
Koppers-Hickson	187500	166975
Dricon lbs.	93177	153180

#### Production Schedule

Oxide lbs.	<u>May</u>	<u>June</u>	<u>July</u>
Koppers	300000	300000	262500
Koppers- Hickson	262500	262500	300000
Dricon	180000	250000	250000

#### Sales Projection

CCA - Koppers	300000	300000	260000
Koppers - Hickson	260000	260000	300000
Dricon	160000	200000	200000

#### Trucking

Our trucking delivered 11 loads CCA, one load of Dricon and two loads WTC products during April; as well, two loads of arsenic acid and 8 loads of chromic acid were picked up.

We have previously reported theft of Ryder Leased Tractor, March 29 from the plant, along with our Fruehauf trailer and a load of CCA Concentrate; to date, there is no further word.

#### Dricon

Considerable difficulty has been experienced with heater units burning out this month; R&D is investigating return to Natural Gas Heaters to alleviate the burn out problem.

TOLS004818

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 4

### VII. Newark, PLANT

Oxide lbs.

Produced  
159487

Shipped  
155855

### Shipments

Pacific Wood - 1 load  
Exterior Wood - 2 loads  
Selma - 1/2 load  
McFarland - Cascade 1 load  
Koppers - Hickson 2 loads

### Product schedule

Oxide lbs.

	<u>May</u>	<u>June</u>	<u>July</u>
Oxide lbs.	161000	180000	200000

### Sales Projection

Oxide lbs.

	<u>May</u>	<u>June</u>	<u>July</u>
Honolulu	28700	28700	28700
Koppers	24000	48000	24000
Licensees	108000	96000	96000
Koppers - Hickson	24000	-----	-----

RFS/JDP/pa

R. F. Simmons  
J. D. Palmer

TOLS004819

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Robert Arsenault  
Jack Kozak  
Glenn Schultz  
Pam Armbruster  
Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

Location K-1001

Subject Monthly Report March 1981

From R. F. Simmons

Location St. Louis, MO.

Date March 31, 1981

### I St. Louis, Missouri Plant & WTC Operations

#### Shipments March Accounting Month

(1) Enfield, N. Carolina Warehouse	7,403
(2) Atlanta, Georgia Warehouse	10,080
(3) Newark, California Warehouse	50,814
(4) Portland, Oregon Blender	59,549
(5) St. Louis, Missouri Plant	<u>179,309</u>
	<u>307,155</u>

#### Penta Shipments March Calendar Month Lbs.

To	Reichhold	WTC	Total	Comparison March	
				1980	1979
FPG	294,125	-	294,125	415,979	449,619
Customers	84,685	48,700	133,385	240,166	333,175
WTC	126,000	(48,700)	77,300	109,500	-
Totals	504,810	-	504,810	763,645	782,794

#### Invoicing March Accounting Month \$

	\$ Profit	1981	1980	1979
FPG Penta	15	170,823	232,831	191,193
Customer Penta	13.7	51,027	67,525	94,981
WTC Products	25.1	307,155	224,802	184,905
KCCA-C	23	352,741	122,950	32,377
KCCA-B	21	43,402	52,784	-
Totals		925,148	700,892	503,456

#### II. Materials

Penta - No other supplier has followed Dow's 65¢ sales lead. Reichhold remains sufficient for all order needs.

Sodium penta - BOW Chemical (Sonford) has quoted good pricing; Geoff Gill working on South American markets.

Petroleum products - Two suppliers now have 1.50 per gallon mineral spirits posted prices. West coast suppliers have announced 6¢ per gallon increases April 6 to bring their price to \$1.43.

TOLS004820

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### III. Inventory

February closing inventory	797,213
March purchases	177,577
Raw Materials	169,487
Containers	8,090
Penta 1408	(185,980)
Penta 1414	(37,952)
March material converted to product	171,639
March cost product sold (Estimated)	230,366†
March closing inventory (Estimated)	744,424
Reserve	1,815

### IV. Sales Forecast \$M

	Apr.	\$Profit	May	June
PPG Penta	185	15	200	175
Customer Penta	50	15	22	50
WTC Products	250	25.1	250	250
KCCA-C	350	23	300	350
KCCA-B	22	21.3	45	45
Totals	857		817	870

### V. St. Louis Comments

No capital expenditures

No medical activity

Inspections-City scales, elevator & plumbing.

Visitors this month have included:

3/4/81 G. GILL & Evan Bravo, Preserve Brazil

3/23/81 all week- Internal auditors R. Graham, C. Juswic & D. Davis

3/24/81 R. E. Spetz

3/26/81 J. Kazak & Bill Singer, Troy Chemical

Lumber Coat Dry is in production and all orders to date have been filled.  
Woodtreat WB Conc. is being returned to R & D except for a limited batch next week to try to get some needed good production samples.

TOLS004821

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-3-

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Koppers	212,000	194,725
Koppers-Hickson	218,500	267,745

#### Production Schedule

Oxide Lbs.	Apr.	May	June
Koppers	225,000	262,500	262,500
Koppers-Hickson	225,000	300,000	300,000

#### Sales Projection

Oxide Lbs.	Apr.	May	June
Koppers	220,000	260,000	260,000
Koppers-Hickson	220,000	300,000	300,000

April total could be higher for Koppers-Hickson if arsenic acid is available. They are requesting at least another 100,000# product.

#### Trucking

During the month 10 loads were delivered to licensees and customers. One load of copper oxide from Valpo to Conley was delivered. Pickuped on our trucks were 6 loads of arsenic and 2 loads of chromic acid. As already reported by telephone and IDS 13, one complete rig and CCA-C load were stolen from Valparaiso on 3/29/81. We have secured a temporary tractor from Ryder and have plenty of flat bed hauling for weeks of 3/30 & 4/6 to stay busy. Conley should have delivery the week of 4/6/81 of 2 new bulk trailers and make available to us one of their old ones if our unit has not appeared by that time. Gross March earnings were \$28,116.

#### Dricon

The outbound conveyor is installed and functioning well. Batching is being adjusted to produce 6000 lbs. per 8 hour shift, 2 men. Cox picked up a load 3/30/81, loads are tentatively set up for Cox & Stewart the week of April 6; we are anticipating start of second shift week of 4/13 or 4/20 depending on demand.

TOLS004822

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_



### VII. Newark Plant

Oxide Lbs.	Produced	Shipped
	180,809	130,310

Shipments	
Utah Wood	Koppers-Ontario
Exterior Wood 2 loads	Koppers-Oroville
Ponderosa	
Honolulu 2 loads	

### Production Schedule

Oxide Lbs.	Apr	May	June
	210,000	150,000	180,000

### Sales Projection

Oxide Lbs.	Apr	May	June
Honolulu	28,700	28,700	28,700
Koppers	24,000	48,000	24,000
Licensees	156,000	96,000	120,000
Customers			24,000
Totals	208,700	172,700	196,000

### Comment:

Our Arsenic Acid (44,000 Lbs) is at 2000 ppm Iron and awaiting arrival of a t/l about April 1 from Mexico in hopes of being able to dilute the Iron sufficiently to resume production which has been suspended since March 19.

### Travel & Meetings

3/3 Valparaiso Plant. PVA Bag producer-Gary, IN.  
3/4 Chicago-Visit 2 used equipment dealers, bag packing machinery  
3/5 1980 Vacation day  
3/30-4/3 Valparaiso - G. Schultz vacation  
4/7- St. Louis-Marino, Lederer, T. Smith, Flickenger

R. F. Simmons

PDS/RFS

TOLS004823

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbruster  
 Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report February 1981

Date February 23, 1981

### I. St. Louis, Missouri Plant & WTC Operations

(1) Enfield, North Carolina Warehouse	\$ 5,392
(2) Atlanta, Georgia Warehouse	21,595
(3) Newark, California Warehouse	42,980
(4) Portland, Oregon Blender	34,354
(5) St. Louis, Missouri Plant	<u>125,710</u>
	<u>230,031</u>

### Penta Shipments February Calendar Month Lbs.

To	<u>Supplier</u>					<u>Comparison Feb.</u>	
		<u>Reichhold</u>	<u>Dow</u>	<u>Vulcan</u>	<u>WTC</u>	<u>Total</u>	<u>1980</u>
FPG	235,475	-	-	-	-	235,475	338,322
Customers	37,880	-	-	-	33,750	71,630	82,900
WTC	-	-	-	-	-	-	(18,480)
Total	273,355	-	-	-	33,750	307,105	402,742
							704,954

### Invoicing February Accounting Month \$

	<u>\$ Profit</u>	<u>1981</u>	<u>1980</u>	<u>1979</u>
FPG Penta	15	161,526	287,584	235,135
Customer Penta	15.4	35,652	41,997	61,706
WTC Products	24.7	230,031	275,410	170,713
KCCA-C	21.7	329,405	125,922	59,922
KCCA-B	18.99	41,043	33,192	-
Totals		797,657	707,105	527,369

### II Materials

Penta- Dow has in effect, discontinued penta production with their 10¢/lb. price increase. Neither Reichhold or Vulcan give any indication of following the lead. Reichhold's water-borne penta system will be trialed on the West Coast - my guess is in March for sure.

Petroleum Products—"continuing on" wild price increases. Our estimate last month of \$1.50 Gal. mineral spirits in three months still is in the correct range.

TOLS004824

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### III Inventory

January closing Inventory	694,826
February purchases	261,358
Raw Materials	245,188
Containers	16,170
Penta 1408	149,999
Penta 1414	-
February material converted for product	170,161
February cost product sold	170,983
February closing Inventory Reserve	785,201 1,428

### IV Sales Forecast \$M

	May.	\$ Profit	Apr.	May
FPG Penta	72	15	200	200
Customer Penta	230	18	22	22
WTC Products	450	27.5	225	250
KCCA-C	40	23.04	325	300
KCCA-B	200	21.3	45	45
Total			817	817

### V. St. Louis Comments

No capital expenditures  
No medical activity

During the month we were visited by all three of our insurers: Aetna, Industrial Risk and Commercial Union, as well as Travelers (who were cleared by the Loss Prevention Dept. for the visit). Travelers is seeking Koppers insurance business and requested visits to certain Koppers' locations for analysis.

Lumber Coat Dry Conc.- We are anticipating hand packaging product by March 15. In the meantime, dissolvable bags, cartons and packaging machinery are receiving thorough investigation in preparation for an AFE.

TOLS004825

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Koppers	412,500	388,750
Koppers-Hickson	187,500	184,770

#### Production Schedule

Oxide Lbs.	Mar.	Apr.	May
Koppers	187,500	150,000	187,500
Koppers Hickson	300,000	262,500	262,500

#### Sales Projection

Oxide Lbs.	Mar.	Apr.	May
Koppers	180,000	140,000	180,000
Koppers Hickson	300,000	260,000	260,000

#### Trucking

Sixteen loads delivered, four loads Arsenic acid and one load Chromic acid picked up, lone load St. Louis products delivered to warehouses. Hired third driver. Conley trucks hauled three loads on backhauls.

#### Drlcon

Truckloads were shipped Orrville and Cox Feb. 16 & 17, but not involved in February business; we have assurance Drlcon Invoicing will happen in March. Another truckload is ready (2/25) and production with one shift is producing 5000 Lbs./Day. With our limited warehouse, loads need to be shipped, as produced, without delay. The second shift needs to be hired, trained and producing very soon if 1981 quotes are to be met.

### VII Newark Plant

Oxide Lbs.	Produced	Shipped
	122,864	189,195

#### Shipments

Louisiana Pacific	Exterior Wood
McFarland Cascade	Seime Pressure Treating
Sequoia Wood Products	Koppers Oroville
Pacific Wood	Koppers Ontario

TOLS004826

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Production Schedule

Oxide Lbs	Mar.	Apr.	May
	150,000	220,000	150,000

### Sales Projection

Oxide Lbs.	Mar.	Apr.	May
Honolulu	43,050	28,700	28,700
Koppers	24,000	48,000	24,000
Licensees	72,000	96,000	96,000
Customers	12,000	24,000	-
Total	151,500	196,700	148,700

### Comment

The latter half of March and the month of April appear to be the critical point for Arsenic supply here.

### VIII Travel & Meetings

2/18 R. Arsenault to St. Louis-discussed health & environmental instructions issued Newark.  
2/16 D. Lambert, Lithium Corp. To St. Louis.  
2/19 J. Bretson, Reichhold to St. Louis.  
3/2 Chicago/Gary-visit packaging machinery & bag manufacturers for Lumber Coat Dry Conc. In afternoon.  
3/3 Valparaiso  
3/4 & 3/5 Vacation days  
3/30 Week- Valparaiso (Schultz' vacation week).

R. F. Simmons

RFS/pds

TOLS004827

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Arbruster  
 Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report January 1981

From R. F. Simmons  
 Location St. Louis, MO.  
 Date February 2, 1981

### I. St. Louis, Missouri Plant & WTC Operations

#### Shipments January Accounting Month WTC Products

1. Enfield, North Carolina Warehouse	\$8,234
2. Atlanta, Georgia Warehouse	13,062
3. Newark, California Warehouse	11,454
4. Portland, Oregon Blender	47,007
5. St. Louis, Missouri Plant	<u>121,869</u>
	<u>201,526</u>

#### Penta Shipments January Calendar Month Lbs.

To	Supplier	Comparison Jan.			
		1980	1979		
FPG	Reichhold	383,199	493,465	363,136	
Customers		128,503	7,150	223,184	175,119
WTC		119,000	(7,150)	111,850	60,250
Totals		630,704		776,899	186,526
					724,781

#### Invoicing January Accounting Month \$

	\$ Profit	1981	1980	1979
FPG Penta	15	112,478	230,469	148,593
Customer Penta	15.5	96,294	122,064	113,433
WTC Products	25.8	201,526	123,480	125,850
K-CCA-C	16.8	95,779	48,725	-
K-CCA-B	14.3	39,354	34,394	-
Totals		545,431	559,133	387,876

#### II. Materials

Penta-Reichhold is having "some environmental problems" with producing prilled penta; no shipments have been missed, but some delays are being incurred. Relationship continues excellent and if any delay occurred past Feb. 1 price increase, allowance was made.

Petroleum based materials-With deregulation things are wild! No. 2 fuel oil now \$1.00 gallon. Mineral spirits are anywhere from \$1.17 to \$1.39 in St. Louis, depending on what stock remains on hand. Indications are temporary stability might occur in 3 months at \$1.50 per gallon. We are spot buying at \$1.16 to \$1.20 and maintaining two months stock.

Chemicals-Several amines, resins, oil additives and wax continue significant cost increases.

TOLS004828

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-2-

### II. Inventory

December closing inventory	653,516
January Purchases	173,053
Raw Material	158,210
Containers	14,845
Penta 1408	(130,615)
Penta 1414	(116,839)
January material converted to product	180,568
January cost of product sold	113,696
January closing inventory	712,875
Reserve	-433

### IV Sales Forecast \$M

	<u>Feb.</u>	<u>% Profit</u>	<u>Mar.</u>	<u>Apr.</u>
FPG Penta	160	15	250	220
Customer Penta	20	15	75	90
WTC Products	200	25.8	225	225
K-CCA-C	250	23.8	200	200
K-CCA-B	40	17.7	40	40
Totals	670		790	775

### V. St. Louis Comments

No capital expenditures. No AFE's.  
 No medical this month.

### VI. Valparaiso Mix Plant

Oxide Lbs.	<u>Produced</u>	<u>Shipped</u>
Koppers	168,000	226,455
Koppers-Hickson	150,000	163,755

#### Production Schedule

Oxide Lbs.	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>
Koppers	337,500	262,500	337,500
Koppers-Hickson	225,000	262,500	262,500

TOLS004829

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### Sales Projection

Oxide Lbs.	Feb.	Mar.	Apr.
Koppers	320,000	260,000	320,000
Koppers-Hickson	200,000	260,000	240,000

Trucking- See Schultz' report. Ten loads of Wolmanac were delivered and six loads of arsenic acid picked up at Conley. C. P. delivered one load copper oxide & Roadway was utilized for five loads chromic acid from Baltimore, Koppers Montgomery trucking should be utilized for the chromic acid all possible as we can realize a 15% freight saving-This will be worked on.

### Dricon

We have boric acid literally out of our ears. Fortunately now we're running at about 20,000/week product and hope for better. One viton side belt has partially split across it's width, repairs are to be made about this weekend. We need to get rid of the one t/l product on hand to give breathing room.

Glenn and Greg had 6 month physical checkup.

### VII. Newark Plant

Oxide Lbs.	Produced	Shipped
	178,871	108,535

### Shipments

Honolulu 4 containers

Sequoia

Seims

Ponderosa 10 drums

Although 79,000 oxide lbs were on hand at January closing, stock was depleted Jan. 27-28.

TOLS004830

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-4-

### Production Schedule

Oxide Lbs.	Feb.	Mar.	Apr.
	210,000	150,000	210,000

### Sales Projection

Oxide Lbs.	Feb.	Mar.	Apr.
Honolulu	-	28,700	28,700
Koppers	48,000	24,000	48,000
Licenses	168,000	144,000	120,000
Customers	24,000	-	-
Total	240,000	196,700	196,700

### Comment.

One truck arsenic acid received Jan. 29 and only a possibility of one more prior to February closing, plus the January closing inventory, will allow for 11 product loads in February; Nine of those are either already shipped or on the books now (Feb. 3).

### VIII. Travel & Meetings

Jan. 15 -At Conley  
Jan 19-20 -Denise Jackson at St. Louis  
Jan. 21 - At Valparaiso  
Jan. 26 - St. Louis Safety Meeting  
Feb. 17 - At Valparaiso  
Feb. 18-Avon Lake, Ohio-Bag packaging machine mfg.  
Feb. 11-St. Louis safety meeting.

R. F. Simmons

RFS/pds

TOLS004831

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Portland Blender Contract

From R. F. Simmons  
Location St. Louis, MO.  
Date February 2, 1981

Please review copy of the attached blending contract with Time Oil Company and note that the contract would automatically renew at the end of February 1982 for another five years term unless either we or Time Oil advised the other party a year in advance desire to discontinue the agreement. Mac McQuire from Real Estate called to remind us of this two weeks ago, then last week Al Schneider of Time called to advise he was writing the letter attached, citing their increased costs which they can't cover under terms of the contract and their increasing environmental concern.

For some time, Time's Portland manager Neil Gallagher has been telling me that he is having problems keeping employees to work on our production because of continuing bad publicity that penta is receiving in the area.

While we never will have such low blender costs again as we have enjoyed with Time, I have asked Mac McQuire to explore in writing with Time how they might reconsider blending for us although I believe Time will reply that they want to discontinue our blending permanently Feb. 28, 1982.

We do have three thoughts for blender replacement if needed but would like your direction and comment. Several times in the past few years, Freistly Oil, a local Portland petroleum product distributor inquired about blending. Hank Tobey of Zehrung has also indicated an inclination for closer relationship. And, our third possibility possibly could be our present mineral spirits source, Lillyblad Petroleum of Tacoma. With declining volume experienced at Portland in the last few years, prospects for double, triple or quadruple blending costs, and costs associated with moving, we must consider our alternatives carefully.

R. F. Simmons

RFS/pds  
Attachments

TOLS004832

cc: Jonette Wharton  
 Frank Klasnick  
 Eric Yeadon  
 Robert Arsenault  
 Jack Kozak  
 Glenn Schultz  
 Pam Armbruster  
 J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
 Location K-1001  
 Subject Monthly Report December 1980

From R. F. Simmons  
 Location St. Louis, MO.  
 Date January 9, 1980

### I. St. Louis, Missouri Plant & WTC Operations

#### Shipments December Accounting Month WTC Products

(1) Enfield, North Carolina Warehouse	11,436
(2) Atlanta, Georgia Warehouse	9,394
(3) Newark, California Warehouse	33,452
(4) Portland, Oregon Blender	41,507
(5) St. Louis, Missouri Plant	118,140

#### Penta Shipments December Calendar Month Lbs.

To	<u>Supplier</u>	Comparison Dec.			
		<u>1979</u>	<u>1978</u>	<u>1979</u>	<u>1978</u>
FPG	<u>Reichhold</u>	298,280	81,697	-	425,120
Customers		130,385	-	32,500	137,085
WTC		42,000	-	(32,500)	51,350
Totals		470,665	81,697	-	613,555
					650,089

#### Chlorinated Phenol Purchased 1980

Tetra	174,000 Lbs. Bags
Penta	1,770,000 Lbs. Bulk
Penta	3,887,000 Lbs. Blocks
Penta	+295,000 Lbs. Bags
Total	7,126,000 Lbs.

#### Penta Sales Lbs.

	<u>1979</u>	<u>1980</u>
Customers	2,957,398	2,033,269
FPD Plants	5,634,860	4,607,575
Total	8,592,258	6,640,844

#### Invoicing December Accounting Month \$

	<u>\$ Profit</u>	<u>1980</u>	<u>1979</u>	<u>1978</u>
FPD Penta	15.2	268,798	171,611	271,348
Customer Penta	15	109,967	96,975	44,624
WTC Products	25.5	213,929	158,125	149,902
K CCA-C	15.7	204,381	108,590	-
K CCA-B	10	20,140	50,707	-
Totals		817,215	586,008	465,874

TOLS004833

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### II. Materials

Penta - Reichhold & Dow have verbally informed us of their intent to follow Culcan's Jan. 1 increase from .53 to .55/lb. Reichhold is making their increase effective Feb. 1; Dow on Jan. 8. Reichhold will have the first penta load into their Detroit warehouse by Jan. 15, and Montgomery will be will calling it promptly; we expect this warehouse to be mutually beneficial.

Petroleum based solvents and energy intensive materials continue frequent cost increases. Steel drums and pails from the various suppliers either increased 6% on January 1 or will have by February. Some Clby-Geigy pigments increased, West Coast mineral spirits are slated for .05/gallon increases Jan. 15.

We are continuing frequent recosting of formulations to stay current with our costs.

### III. Inventory

November closing inventory	608,569
December purchases	219,793
Raw Materials	213,942
Containers	5,851
Penta 1408	(196,828)
Penta 1414	(21,202)
December material converted to product	143,157
December cost product sold	174,846
December closing inventory	653,516
Reserve (Due to Nov. Physical adjustment)	-2,639

IV Sales Forecast \$M	Jan.	Profit	Feb.	Mar.
FPG Penta	110	15	150	250
Customer Penta	91	15	60	75
WTC Products	175	25.5	225	225
K-CCA-C	92	25.4	150	200
K-CCA-B	19	19.3	19	38
Totals	487		604	788

TOLS004834

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### V. St. Louis Comments

No capital expenditures; No. AFE's.

No medical comments.

Visited by city air pollution inspector-Furnace smoking a bit, air adjustment made and no further problems.

Total invoicing from St. Louis up 12.3% over 1979.

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Koppers	225,000	206,985
Koppers-Hickson	262,500	269,575

### Production Schedule

Oxide Lbs.	Jan.	Feb.	Mar.
Koppers	150,000	187,500	300,000
Koppers-Hickson	187,500	187,500	225,000

### Sales Projection

Oxide Lbs.	Jan.	Feb.	Mar.
Koppers	160,000	180,000	300,000
Koppers-Hickson	180,000	200,000	220,000

Trucking-See Schultz report. Our second driver transferred to Conley at the end of November. With business at such a low level we did not need to give any loads to outside hauling. A replacement driver has been hired and spent half the month in training (riding double) causing higher expenses also. The net result will be a trucking operation loss for the month of \$2-3 thousand dollars. If there is sales improvement and weather does not hamper January trucking activity too severely, improvement is expected.

Oricon- We have taken 2 truckloads of Boric Acid to which we were committed in 1980 and stored them with Jim Kent. We are out only loading and transfer expenses to the plant, no rent is being charged for this temporary assistance.

TOLS004835

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-4-

Valparaiso Comments- Attached is another EPA form filled out Dec. 23 by Indiana State Board of Health Inspectors George Oliver and Daryl Koepp during their visit to the plant. Again, no actual plant inspection occurred, the visit was confined to the office.

To date, no chemical wastes have ever been removed from Valpo since its 1977 start up. All liquid sludge has been reused and the dry scrubber pipe cleanout material is slowly being reused. Probably some time in late 1981 we will have condensed the toxic material for disposal to perhaps 10 to 12 drums of filter cartridges, insolubles and lined CCA floor drainings.

### VII. Newark Plant

Oxide Lbs.	Produced	Shipped
	138,809	173,245

#### Shipments

Exterior	2 containers-Honolulu
Pacific-Bakersfield	Koppers Oroville
Seima	Koppers Ontario
Louisiana Pacific	

#### Production Schedule

Oxide Lbs.	Jan.	Feb.	Mar.
	150,000	150,000	180,000

#### Sales Projection

Oxide Lbs.			
Honolulu	57,400	-	28,700
Koppers	-	48,000	24,000
Licenses	72,000	120,000	120,000
Customers	3,500	24,000	24,000
Total:	132,900	192,000	196,700

Comment: We are still concerned that we have no written quality control standards.

TOLS004836

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### VIII Travel & Meetings

Dec 3- St. Louis R&D meeting, non St. Louis personnel attending were Messieurs.  
Hite, Arsenault & Kozak. Ken Cogan also visited this date.  
Dec. 4 - Don Marion visited.  
Dec. 11-John Bridges & Gerald Zondervan visited.  
Dec. 23 R. F. Simmons to Valpo for EPA visit.  
Dec. 24 & 29-31 Vacation  
Jan 15 R. F. Simmons to Conley  
Jan 19/20 Denise Jackson to St. Louis  
Jan 22- Valpo.

R. F. Simmons

RFS/pds

TOLS004837

cc:

F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery ←  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1000

Location St. Louis, Missouri

Subject Monthly Report January, 1975  
Wood Treating Chemicals Operation

Date February 3, 1975

### I. Shipment Highlights - (January Accounting Month)

#### 1. Camden, New Jersey Warehouse

2 Sales Total for Month \$316.25

#### 2. Enfield, North Carolina Warehouse

6 Sales Total for Month \$3,425.50

#### 3. Newark, California Warehouse - By Customer

P. B. M. Supply	Chico, California	
Liquid Noxtane SS 1	44 X 55 Gal. Drums	\$ 11,313.50

Snyder Lumber Company	Turlock, California	
Liquid Noxtane SS 1	10 X 55 Gal. Drums	\$ 3,190.00

Koppers Company, Inc.	Oroville, California	
Clear End Sealer	1 X 55 Gal. Drums	\$ 148.50

#### 4. Tuscaloosa, Alabama Blender - By Customer

Woodtox 140 R T U - Bulk

Tusco Wood Products		
Tuscaloosa, Alabama	4538 Gal.	\$ 3,857.30

Holman Wood Products		
Northport, Alabama	533 Gal.	\$ 453.05

TOLS004838

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date February 3, 1975

Page 2

### 5. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 R TU - Bulk

Texas Container Texarkana, Texas	6042 Gal.	\$ 5,135.70
Leggett Lumber Company Livingston, Texas	6173 Gal.	\$ 5,247.05
Bibler Bros. Clarksville, Arkansas	6211 Gal.	\$ 5,279.35
Commercial Box Texarkana, Texas	6036 Gal.	\$ 5,130.60

### 6. Minneapolis, Minnesota Blender - Total

#### Timbertox 7 1/2%

Koppers Superior Plant	12341 Gals.	\$ 8,391.88
------------------------	-------------	-------------

### 7. Portland, Oregon Blender - By Customer

J. H. Baxter Company Petroset	Eugene, Oregon 10 X 460# Drums	\$ 3,450.00
Kinnear Door Company Woodtox 140 R TU	Centralia, Washington 10 X 55 Gal. Drums	\$ 852.50
Morris Lumber Company Timbertox 40 Conc.	Grants Pass, Oregon 2 X 55 Gal. Drums	\$ 412.50
Caveman Lumber Company Woodtox 140 R TU	Merlin, Oregon 16 X 55	\$ 1,364.00

TOLS004839

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date February 3, 1975

Page 3

Cascade Ind. Supply Woodtox 140 R TU	Klamath Falls, Oregon 7086 Gals.	\$ 6,023.10
B & B Homes Corporation Woodtox 140 R TU	Casper, Wyoming 1 X 55 Gal. Drums	\$ 96.25
Overhead Door Woodtox Pre Prime	Salem, Oregon 2113 Gal.	\$ 1,901.70

### 8. St. Louis, Missouri

#### Penta (Calendar January Month)

F P D Plants	664,590
Customers	305,754
W T C	0
Total	970,344 Lbs.

#### W T C Products - Major Shipments - By Customer

Bennett Box Company Woodtox 140 R TU	Centreville, Iowa 10938 Gals	\$ 9,297.30
Kansas Box Company Woodtox 140 R TU	Independence, Kansas 5933 Gals	\$ 5,043.05
Dyer Fruit Box Woodtox 140 R TU	Dyer, Tennessee 5976 Gals	\$ 5,079.60
Northern Sash & Door Woodtox Pre Prime R TU	Hawkins Wisconsin 4114 Gals	\$ 3,373.48

TOLS004840

BZTO104(e)041661

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. E. Simmons  
 Location \_\_\_\_\_  
 Date February 3, 1975

Page 4

### W T C Products - Major Shipments - By Customer Continued

Malta Manufacturing Company Woodtox Pre Prime R TU	Malta, Ohio 6056 Gals	\$ 4,965.92
Knapheide Manufacturing Woodtox 152 R TU	Quincy, Illinois 4017 Gals	\$ 4,820.40
Norton Manufacturing Co. Timbertox D-5	Memphis, Tennessee 6099 Gals	\$ 3,781.38
R. J. Bond Timbertox D-5	Carmi, Illinois 5828 Gals	\$ 3,613.36
Penn Central Railroad Timbertox D-5	New York, New York 91 X 55 Gal. Drs.	\$ 5,005.00
Penn Central Railroad Timbertox D-5	Philadelphia, Pennsylvania 80 X 55 Gal. Drs.	\$ 4,400.00
E T C Chemical Lumbrella 33 C.T.	Hattiesburg, Mississippi 135 X 3 Gal	\$ 2,205.23
Union Camp Lumbrella 33 R.W.	Chapman, Alabama 81 X 3 Gal.	\$ 1,737.45
Mac Millan Bloedel Lumbrella 33 Yellow	Pine Hill, Alabama 4 X 55 Gal.	\$ 1,331.00
Koppers Company, Inc. W T C # 71 W T C # 7-11	Charleston, South Carolina 6 X 515 #	\$ 2,039.40
	6 X 39 #	\$ 159.12
		\$ 2,198.52

TOLS004841

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 3, 1975

Page 5

### WTC Products - Major Shipments - By Customer Continued

Turner Supply	Mobile, Alabama	
Super Noxtane	300 X 50 #	\$ 5,940.00
Santobrite	90 X 100 #	\$ 4,680.00
		\$ 10,620.00

### Balance of Shipments

Woodtox 140 R TU	4 X 55 Gal. Drs.	\$ 385.00
Woodtox 152 R TU	2 X 55 Gal. Drs.	\$ 209.00
Woodtox S Conc.	10 X 55 Gal. Drs.	\$ 1,410.75
Woodtox Pre Prime R TU	10 X 55 Gal. Drs.	\$ 907.50
Woodtox R TU	1 X 55 Gal. Drs.	\$ 108.90
Woodtox R TU	10 X 5 Gal. Drs.	\$ 115.00
Woodtox R TU	5 X 6 X 1 Gal. Drs.	\$ 81.00
Penta Wood Conc.	8 X 55 Gal. Drs.	\$ 1,672.00
Penta Wood Conc.	60 X 5 Gal. Drs.	\$ 1,095.00
Penta Wood Conc.	65 X 6 X 1 Gal. Drs.	\$ 1,569.00
Penta Wood R TU	6 X 55	\$ 495.00
Penta Wood R TU	3 X 5	\$ 29.25
WTC # 71	8 X 515 #	\$ 2,760.40
WTC # 74	1 X 460 #	\$ 230.00
WR 340 Conc.	20 X 408 #	\$ 1,379.04
KLB Beam Sealer	20 X 55 Gal.	\$ 1,980.00
Red End Sealer	1 X 55 Gal.	\$ 162.25
Clear End Sealer	1 X 55 Gal.	\$ 148.50
Green End Sealer	3 X 5 Gal.	\$ 50.25
Toluidine Red	3 X 45 #	\$ 290.25
Coppertreat 120	1 X 55 Gal.	\$ 91.96
Polelife TF	10 X 50 #	\$ 255.00
Kraft Poly Paper	6 Rolls	\$ 49.50
Penta Stain #502	5 X 55 Gal.	\$ 962.50

TOLS004842

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date February 3, 1975

Page 6

### Balance of Shipments Continued

Penta Stain # 505	1 X 55 Gal.	\$ 192.50
Penta Stain # 509	1 X 55 Gal.	\$ 192.50
Penta Stain # 507	20 X 5 Gal.	\$ 410.00
Penta Stain # 507	3 X 4 X 1 Gal.	\$ 55.20
Penta Stain # 503	5 X 4 X 1 Gal.	\$ 82.80
B Wood Pres.	2 X 5 Gal.	\$ 16.50
Woodtreat AA	25 X 40 #	\$ 570.00

### Penta invoicing for January Accounting Month

Koppers Plants	\$ 307,018
Customers	\$ 240,957

**\$ 547,975 (Up \$376,917 from same month 1974)**

### WTC Products invoiced January accounting Month

**\$ 155,682 (Up \$75,105 from same month 1974)**

### II. Raw Materials

No significant cost changes this month. No change in co-solvent status; WK-55 will be out when current stock is gone - we apparently will no longer be able to use Exxon Decyl bottoms due to a high content of solid residue in material from the refinery. Oxo Bottoms and KB-3 supply continues good and downstream it appears we must rely on only these co-solvents.

### III. Inventory

No problems - No excess stock.

TOLS004843

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date February 3, 1975

Page 7

### IV. Profit Opportunities

Lumber Chemicals on the West Coast is recovering slightly. Our first production since October at Newark is now scheduled in ~~October~~. February. A few loads of Woodtox 140 RTU at St. Louis, two at Cotton Valley and one at Tuscaloosa since January closing indicate opening of some Ammo Box business.

Sales of other products have been so few as to forecast nothing of importance.

### V. Assistance Requirements

1. Competitive penta pricing
2. Continued search for inexpensive Cosolvents.
3. Aggressive sales action.
4. F. Klasnick scheduled week 2/10 in St. Louis for redistribution of overhead study.

### VI. General Comments

#### February Sales Forecast

Penta	\$150,000
WTC	\$200,000

Blending facility at Minneapolis or vicinity needs replacing; we are actively searching for a blender to make treating plant solution and millwork solution.

### VII. Travel Plans (tentative)

Minneapolis - 2 Days week of 2/17  
Newark - Portland - week of 2/24

TOLS004844

R. F. Simmons

RFS/sjk

cc: F. E. Doge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery ←  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location Pittsburgh, PA K/1000

Subject Monthly Report - February 1975  
Wood Treating Chemicals Operations

From R. F. Simmons

Location St. Louis, Missouri

Date February 27, 1975

### I. Shipment Highlights - February Accounting Month)

#### 1. Camden, New Jersey Warehouse

5 Sales Total for Month

\$ 3,533.00

#### 2. Enfield, North Carolina Warehouse

9 Sales Total for Month

\$ 11,646.15

#### 3. Newark, California Warehouse - By Customer

Capital Industries Supply

Salem, Oregon

Liquid Noxtane SS 1

40 X 55 Gal. Drums

\$ 10,285.00

Snider Lumber Company

Turlock, California

Liquid Noxtane SS 1

17 X 55 Gal. Drums

\$ 5,423.00

Liquid Azide

3 X 55 Gal. Drums

\$ 1,138.50

\$ 6,561.50

Great Western Chemical

Seattle Washington

Red End Sealer

5 X 55 Gal. Drums

\$ 544.50

Cascade Ind. Supply

Redding, California

Liquid Noxtane SS 1

3 X 345 Gal. Bins

\$ 8,064.30

Liquid Noxtane SS 1

15 X 55 Gal. Drums

\$ 3,856.80

\$ 11,921.20

Munnell & Sherrill

Arcata, California

Orange End Sealer

4 X 55 Gal. Drums

\$ 365.80

Clear End Sealer

1 X 300 Gal. Bin

\$ 420.00

Blue End Sealer

1 X 55 Gal. Drum

\$ 15.00

Clear End Sealer

4 X 55 Gal. Drums

\$ 30.80

Liquid Noxtane SS 1

3 X 345 Gal. Bins

\$ 15.80

Liquid Noxtane SS 1

4 X 55 Gal. Drums

\$ 65.00

TOLS004845

# KOPPERS

## Interoffice Correspondence

To R. B. PutmanFrom R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 27, 1975

Page 2

### Newark California Warehouse - By Customer Continued

Munnell &amp; Sherrill

Arcata, California Continued

Liquid Azide

2 X 55 Gal Drums

\$ 598.40

\$ 8,675.71

### 4. Tuscaloosa, Alabama Blender - By Customer

Woodtox 140 R TU - Bulk

Tusco Wood Products  
Tuscaloosa, Alabama

8,000 Gals.

\$ 6,800.00

International Wooden Container  
Ardmore, Tennessee

2,010 Gals.

\$ 1,708.50

Cottondale Wood Products  
Tuscaloosa, Alabama

1,639 Gals.

\$ 1,393.15

Holman Wood Products  
Northport, Alabama

300 Gals.

\$ 255.00

### 5. Cotton Valley, Louisiana Blender - By Customer

Woodtox 140 R TU - Bulk

Lear Sigler, Inc.  
Arcadia, Louisiana

8,081 Gal.

\$ 6,868.35

Texas Container  
Texarkana, Texas

6,121 Gal.

\$ 5,203.85

Commercial Box  
Texarkana, Texas

6,017 Gal.

TOLS004846

\$ 5,114.10

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 27, 1975

Page 3

### Cotton Valley, Louisiana Blender - By Customer Continued

Dunagan Wood Products  
Cove, Arkansas

4,008 Gal. \$ 3,406.80

### 6. Minneapolis, Minnesota Blender - Total

Timbertox 7 1/2%

Koppers Superior Plant 5957 Gal. \$ 4,050.70

### 7. Portland, Oregon Blender - By Customer

Great Western Chemical  
Woodtox 140 R TU

Seattle, Washington  
2020 Gal. \$ 1,717.00

Cascade Wood Products  
Woodtox 140 R TU  
Woodtox Pre Prime R TU

White City, Oregon  
3091 Gal. \$ 2,627.35  
3625 Gal. \$ 3,262.50

\$ 5,889.85

Gilsonite Inc.  
Redy Coat Penta Conc.

Portland, Oregon  
60 X 55 Gal Drums \$ 7,590.00

PBM Supply & Mfg Co.  
Woodtox Pre Prime R TU

Chico, California  
1 X 55 Gal. Drum \$ 91.57

Valk Enterprises  
Woodtox 140 Conc.

Riverside, California  
10 X 55 Gal. Drums \$ 1,705.00

TOLS004847

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location

Location

Subject

Date February 27, 1975

Page 4

### 8. St. Louis, Missouri

#### Penta (Calendar February Month.)

F PD Plants	39,900
Customers	131,561
W T C	40,811
Total	212,272 Lbs.

#### W T C Products - Major Shipments - By Customer

Bennett Box Company

Centreville, Alabama

Woodtox 140 R TU

5573 Gals.

\$ 4,737.0

Milan Box Corporation

Milan, Tennessee

Woodtox 140 RTU

6009 Gals.

\$ 5,107.6

Kansas Box and Lumber

Independence, Kansas

Woodtox 140 R TU

6065 Gals.

\$ 5,155.2

Hurd Millwork

Medford, Wisconsin

Woodtox Pre Prime RTU

5955 Gals.

\$ 4,883.1

Vetter Mig. Company

Stevens Point, Wisconsin

Woodtox Pre Prime RTU

2220 Gals.

\$ 1,820.4

Asplundh Tree

Willow Grove, PA

Poletox

20 X 380 #

\$ 3,952.0

Koppers Company, Inc.

Magnolia, Arkansas

K.L.B Beam Scaler

12 X 55 Gal.

\$ 1,188.0

Weyerhaeuser Company

DeQueen, Arkansas

Liquid Noxtane SS 1

20 X 55 Gal.

\$ 6,215.0

TOLS004848

BZTO104(e)041669

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 27, 1975

Page 5

### W T C Products - Major Shipments - By Customer Continued

Weyerhaeuser Company  
Lumbrella 33 Cherry Tone

Plymouth, North Carolina	\$ 1,336.50
54 X 3 Gal.	

New England Log Homes  
Woodtox 140 Conc.

Great Barrington, Mass.	\$ 2,233.00
14 X 55 Gal.	

Georgia-Pacific Corp.  
Lumbrella 33 Yellow

Ahoskie, North Carolina	\$ 4,410.45
243 X 3 Gal.	

Georgia Pacific Corp.  
Lumbrella 33 Yellow  
Green End Spray 400

Whiteville, North Carolina	\$ 4,410.45
243 X 3 Gal.	
2 X 55 Gal.	

\$ 792.00

\$ 5,202.45

Chemical Specialties  
Timbertreat 625  
Lumbrella 33 Yellow  
Lumbrella 12 Red Brown  
Liquid Noxtane SS 1  
Penta Wood Pres. Conc.  
Green End Spray 400

Valdosta, Georgia	
5 X 55 Gal.	\$ 1,113.75
540 X 3 Gal.	\$ 8,820.90
16 X 53 Gal.	\$ 2,518.56
12 X 55 Gal.	\$ 3,267.00
2 X 55 Gal.	\$ 356.40
10 X 55 Gal.	\$ 3,118.50

\$ 19,195.11

### Balance of Shipments - By Products

Woodtox 140 R TU  
Woodtox Pre Prime Conc.  
Woodtox Pre Prime R TU  
Woodtox R TU  
Woodtox R TU  
Penta Wood Pres. Conc.  
Penta Wood Pres. Conc.

8 X 55 Gal.	\$ 770.00
1 X 55 Gal.	\$ 181.50
2 X 55 Gal.	\$ 203.50
1 X 55 Gal.	\$ 121.00
23 X 6 X 1 Gal.	\$ 414.00
1 X 55 Gal.	\$ 217.25
51 X 5 Gall.	\$ 984.00

TOLS004849

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 27, 1975

Page 6

### Balance of Shipments - By Product Continued

Penta Wood Pres. Conc.	24 X 6 X 1 Gal.	\$ 601.3
Penta Wood Pres. RTU	1 X 55 Gal.	121.2
Penta Wood Pres. RTU	35 X 5 Gal.	376.2
Penta Wood Pres. RTU	25 X 6 X 1 Gal.	390.0
Timbertreat 625	2 X 55 Gal.	561.0
Coppertreat 120	10 X 55 Gal.	866.8
Lumbrella 15 Redwood	2 X 53 Gal.	434.6
Lumbrella 12 Red Brown	4 X 53 Gal.	795.0
Lumbrella 33 Yellow	27 X 3 Gal.	668.2
W T C # 71	3 X 515 #	1,081.5
Poletox	2 X 60 #	68.4
Polelife TF	25 X 50 #	637.5
B Wood Pres.	1 X 6 X 1 Gal.	13.8
Penta Stain #502	7 X 5 Gal.	143.5
Penta Stain #502	16 X 4 X 1 Gal.	294.4
Penta Stain #506	8 X 5 Gal.	180.0
Penta Stain #506	14 X 4 X 1 Gal.	257.6
Penta Stain #507	5 X 4 X 1 Gal.	92.0
Polykraft Paper	5 Rolls	41.2
Polelife Tag and Nails	10 Lots	77.5
Woodtreat AA Guns	2 Each	71.7

### Penta Invoicing for February Accounting Month

Koppers Plants	\$ 67630
Customers	72938

\$ 140608 (Down \$73,075 from Feb. 1974)

### W T C Products Invoiced February Accounting Month

\$ 181,063 (Up \$35,829 from Feb. 1974)

TOLS004850

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 27, 1975

Page 7

### II. Raw Materials

No significant change in co-solvent status. No good replacement for WK-55. Exxon Decyl Bottoms discontinued due to residue in product; limited amount available from Thermac Co. - car on order may be delivered about April 15. Oxo Bottoms available, so we are not in need. KB-3 supply is good.

Cost of some materials continue to increase - notably pigments and oil-related mineral spirits and fuel oil. New cost standards are being done.

Oil-related materials continue on close allocation. Otherwise, there are no shortages now.

### III. Inventory

Most Color-Seal raw materials sold.

We have/are making a real effort to control our inventory.

### IV. Profit Opportunities

The recovery of lumber chemicals in the West has slowed appreciably. There has been a slight recovery in the ammo box business and our mill-work customers' order pattern is near normal, but rising costs are not being reflected in increased selling prices yet.

### V. Assistance Requirements

- Mostly a Repetition of last month, exception item # 5 & 6

1. Competitive penta pricing with a real sales effort immediately following.
2. Continued search for inexpensive co-solvents.
3. Aggressive sales action.

TOLS004851

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date February 27, 1975

Page 8

- Assistance Requirements Continued
4. Completion of redistribution of burden study.
  5. Set-up of inventory by computer
  6. Re-evaluation of most selling prices to consider new costing.

### VI. General Comments

#### Forecast of a Horrible March for WTC:

Penta	\$100,000
WTC Products	85,000

As a result of meeting a prospective blender in Minneapolis 2/26 we are optimistic that his anticipated reply soon will guarantee a mineral spirits source, assure blending of Timbertox and Woodtox Pre-Prime in the area and give us sales of bulk for repackaging that was formerly sold by Chapman.

Also optimistic that contact with Thatcher Chemical in Salt Lake City will make a significant reduction in copper cost.

### VII. February Travel

- 1/29 Atlanta Plant with J-H engineer Currie.
- 2/17-18-19 Newark, CA plant and suppliers
- 2/19-20 Los Angeles - Prospective Suppliers
- 2/21 Salt Lake City - Prospective Suppliers
- 2/25 Minneapolis - Prospective Blender
- 2/26 Chicago - Umbrella Kettle inspection
- 2/28 Orrville, Ohio - Product development dept.

TOLS004852

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date February 27, 1975

Page. 9

### Tentative March Travel

3/3      Meeting with Monsanto Penta Product Managers

3/6      Pittsburgh                    J. Flinn

                                        D. Taylerson

                                        F. Klasnick

3/21     Kingsport, Tenn - Cosolvent Supplier

One day probable Minneapolis

One day probable Appleton, Wisc. area

R. F. Simmons

RFS/sjk

TOLS004853

BZTO104(e)041674

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge

J. D. Hite

R. D. Arsenault

J. M. Montgomery ←

D. F. Taylerson

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1000

Location St. Louis, Missouri

Subject Monthly Report - March 1975  
Wood Treating Chemicals

Date March 31, 1975

### I. Shipment Highlights - March Accounting Month

#### 1. Camden, New Jersey Warehouse

5 Sales Total for Month	\$ 3,018.47
-------------------------	-------------

#### 2. Enfield, North Carolina Warehouse

6 Sales Total for Month	\$ 7,848.27
-------------------------	-------------

#### 3. Conley, Georgia Warehouse

1 Sale Total for Month	\$ 490.05
------------------------	-----------

#### 4. Newark, California Warehouse - By Customer

Munnell & Sherrill Clear End Sealer	Eugene, Oregon 2 X 55 Gal.	\$ 182.33
Munnell & Sherrill Liquid Noxtane SS 1	Ukiah, California 10 X 55 Gal.	2,711.50
Chapman Chemical Co. Liquid Azide 200	Memphis, Tennessee 10 X 55 Gal.	3,291.75
P. B. M. Mill Supply Liquid Noxtane SS 1 Liquid Azide 200	Chico, California 44 X 55 Gal. 4 X 55 Gal.	11,313.50 1,196.80
		12,510.30

Webb Furniture Company  
Liquid Azide 200

Galax, Virginia  
2 X 55 Gal.

803

TOLS004854

BZTO104(e)041675

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location  
Subject

From R. F. Simmons  
Location  
Date March 31, 1975

Page 2

### Newark, California Warehouse - By Customer Continued

Cascade Industrial Supply	Klamath Falls, Oregon	
Liquid Noxtane SS 1	2 X 345 Gal.	3,225.75
Liquid Noxtane SS 1	21 X 55 Gal.	5,399.63
Liquid Azide 200	8 X 55 Gal.	2,393.60
		\$ 11,018.98

### 5. Tuscaloosa, Alabama Blender - By Customer

#### Woodtox 140 R T U Bulk

Cottondale Wood Products		
Tuscaloosa, Alabama	1391 Gal.	\$ 1,147.30
Tusco Wood Products		
Tuscaloosa, Alabama	8073 Gal.	\$ 6,659.60

### 6. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 R T U Bulk

F & M Corporation		
Caney, Kansas	6229 Gal.	5,294.65
General Box Company		
Houston, Texas	7181 Gal.	6,103.85

Commercial Box		
Texarkana, Texas	6036 Gal.	5,130.60

### 7. Portland, Oregon Blender - By Customer

TOLS004855

Willard Prod.	Redwood City, California
WR 340 Conc.	6 X 408 # Drs.

438.19

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 31, 1975

Page 3

### Portland, Oregon Blender - By Customer Continued

West Coast Mills  
Woodtox 140 R T U

Chehalis, Washington  
960 Gal. **816.00**

Willamette Valley  
Woodtox 140 R T U

Eugene, Oregon  
3501 Gal. **2,975.85**

### 8. St. Louis, Missouri

#### Penta (Calendar March Month)

Lbs.

Supplier

Monsanto

Reichhold

F P D Plants

118731

208610

Customers

118500

W T C

40497

Total

277,728

208,610

### W T C Products - Major Shipments - By Customer

Asplundh Tree Expert  
Poletox

Mansfield, Texas  
32 X 380 # \$ **6,323.20**

Northern Sash & Door Co.  
Woodtox Pre Prime R T U

Hawkins, Wisconsin  
4082 Gal. **3,347.24**

New Idea Farm Equipment  
Woodtox 140 R T U

Coldwater, Ohio  
3803 Gal. **3,232.55**

Milan Box Company  
Woodtox 140 R T U

Milan, Tennessee  
6012 Gal. **5,110.20**

TOLS004856

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 31, 1975

Page 4

### W T C Products - Major Shipments - By Customer Continued

Jones Lumber Company

Elizabeth City, North Carolina

Liquid Noxtane SS 1

26 X 55 Gal. 7,865.00

Timbertreat 625

10 X 55 Gal. 2,475.00

Lumbrella 15 Redwood

14 X 53 Gal. 2,597.00

Lumbrella 15 Green

1 X 53 Gal. 185.50

13,122.50

Penn Central Railroad

Philadelphia, Pennsylvania

Timbertox D-5

80 X 55 Gal. 4,400.00

E T C Chemical Co.

Hattiesburg, Mississippi

Lumbrella 33 Yellow

135 X 3 Gal. 2,205.23

Lumbrella 33 Cherry Tone

135 X 3 Gal. 2,205.23

4,410.46

Federal Chemical Corp.

Indianapolis, Indiana

Woodtox P P Conc.

20 X 55 Gal. 3,190.00

Michelin Chemical Co.

Detroit, Michigan

WR 340 Conc.

20 X 408 # 1,460.64

R. J. Bond

Carmi, Illinois

Timbertox D-5

5823 Gal. 3,610.26

Kansas Box and Lumber

Independence, Kansas

Woodtox 140 R T U

6000 Gal. 5,100.00

Temple Ind. Inc.

Diboll, Texas

WR 340 Conc.

48 X 408 3,309.70

TOLS004857

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 31, 1975

Page 5

### WTC Products - Major Shipments - By Customer Continued

Weathershield Mfg.	Medford, Wisconsin	
Woodtox PrePrime R T U	4055 Gal.	3,325.10
Universal Co-op	York, Pennsylvania	
Penta Wood Pres. Conc.	4021 Gal.	9,851.45

### Balance of Shipments - By Product

Woodtox 140 Conc.	2 X 55 Gal.	341.00
Woodtox 140 R T U	2 X 55 Gal.	192.50
Woodtox 152 R T U	2 X 55 Gal.	209.00
Woodtox Pre Prime R T U	22 X 55 Gal.	1,996.50
Woodtox R T U	18 X 5 Gal.	229.50
Woodtox R T U	14 X 6 X 1 Gal.	252.00
Penta Wood Pres. Conc.	12 X 55 Gal.	2,626.25
Penta Wood Pres. Conc.	15 X 5 Gal.	333.75
Penta Wood Pres. Conc.	20 X 6 X 1 Gal.	594.00
Penta Wood Pres. R T U	30 X 5 Gal.	322.50
Penta Wood Pres. R T U	12 X 6 X 1 Gal.	187.20
Timbertreat 625	2 X 55 Gal.	561.00
Liquid Noxtane SS 1	1 X 55 Gal.	335.00
Clear End Sealer	1X 55 Gal.	148.50
WTC #71	3 X 515 #	1,019.70
Lumbrella 12 Red Brown	4 X 53 Gal.	795.00
Top Form Fence Guard	138 X 4 X 1 Gal.	999.12
Super Noxtane	20 X 50 #	470.00
Santobrite	2 X 100 #	140.00
WTC 7-11	6 X 39 #	159.12
Blue Anstrik 1-50	1 X 5 Gal.	123.75
Pigment Yellow X 3492	1 X 4 Gal.	55.52

TOLS004858

BZTO104(e)041679

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 31, 1975

Page 6

### Penta Invoicing for March Accounting Month:

Koppers Plants	16,758
Customers	<u>125,737</u>
March, 1974	142,495
	423,497
W T C Products	149,140
March 1974	234,712

### II. Raw Materials

Co-solvents. No progress on WK-55 replacement. KB-3, B-6 and Oxo bottoms available. Eastman working to cut low ends off B-6 to meet solvent spec. for Ammo box business; expect answer in April.

Low end point, ecologically clean, mineral spirits for millwork business. We can give the green light to sales to secure all business possible the balance of 1975; three sources of the mineral spirits are committed - current price .408 gallon delivered St. Louis.

Cost raises experienced this month in tall oil fatty acid, amines, lithium hydroxide, pigments and fuel oil. Only decrease was a temporary adjustment by one supplier on mineral spirits.

### III. Inventory

If sales recover to near normal levels for W T C products for the second quarter of 1975, somehow inventory evaluation will be reduced to \$600,000. Year-end evaluation was \$994,261; end of first quarter \$800,000 estimated.

TOLSO04859

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 31, 1975

Page 7

### IV. Profit Opportunities

Cost standards now updated as needed; some pricing adjusted accordingly, others not changed in order to meet competition. Low margins exist on Liquid Noxtane and Lumbrella at St. Louis (at least using current method of overhead burden computation) - Lumbrella labor and overhead will lower as soon as new production costs can be established with sufficient volume to evaluate.

Ammo box solution continues slow recovery, sale of millwork solution to New accounts is contributing to increase in this area. Liquid Noxtane and Liquid Azide accounts continue a slow recovery; most Lumbrella accounts are not selling and individual mills are expressing more desire for pigment only instead of organism control and water repellancy.

### V. Assistance Requirements

1. Research study and effort to eliminate high price components in Liquid Noxtane and Lumbrella.
2. Concentrated selling efforts on Penta and WTC product line should continue.
3. Continued search for inexpensive Penta co-solvents.
4. Completion of overhead burden distribution study.
5. Inventory computerization.

### VI. General Comments

Sales forecast for April:

Penta	\$250,000
WTC	150,000

TOLS004860

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date March 31, 1975

Page 8

### General Comments Continued

Prospective Minneapolis blender cannot comply with air pollution requirements and is unable to blend for us; we are continuing the search for a blender in the area.

Corporate purchasing now negotiating with Thatcher Chemical in Salt Lake City for copper purchasing. In working with corporate traffic department on satisfying Federal regulations on shipping, it is beginning to appear inspection, testing and D.O.T. approval stamping may be necessary by July 1 on about 35 to 40 tote bins in use on the west coast; cost of this will approximate \$100 per bin.

Every D.O.T. official seems to have a different view on requirements of their regulations but the general reaction has been that Wolmanac Conc. should continue to be shipped in 17C, 16 guage drums; very definitely, regulations will not permit use of fiber drums or PE acid drums and all containers being considered for return trips would have to be cleaned, inspected and retested on each trip made, return freight at approx. \$6 per unit plus cleaning of \$6-8 and .50 local freight to Newark, so this is eliminated.

### VII. Travel Plans

March

7th - Pittsburgh  
20-21 - Eastman Chemical, Kingsport, Tenn.

April (Tentative)

2 days Minneapolis  
5 days Newark, CA and Portland  
1 day Tuscaloosa

R. F. Simmons

RFS/sjk

TOLS004861

# KOPPERS

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery ←  
 D. F. Taylerson

## Interoffice Correspondence

To R. B. Putman

Location Pittsburgh, PA K/1001

Subject Monthly Report - April 1975  
Wood Treating Chemicals.

From R. F. Simmons

Location St. Louis, Missouri

Date April 30, 1975

### I. Shipment Highlights - April Accounting Month

#### 1. Camden, New Jersey Warehouse

4 Sales total for month	\$ 2894.45
-------------------------	------------

#### 2. Enfield, North Carolina Warehouse - By Customer

	Total	\$ 17,286.25
--	-------	--------------

Link-Taylor Corp. Liquid Noxtane SS 1	Lexington, N. C. 10 X 55 Gal.	3,190.00
--	----------------------------------	----------

Elkins Furn. Liquid Noxtane SS 1	Elkins, N. C. 8 X 55 Gal.	2,684.00
-------------------------------------	------------------------------	----------

Kirkman Lumber Co. Liquid Noxtane SS 1 Lumbrella 12 Red/Brown	Columbia, N. C. 5 X 55 Gal. 5 X 53 Gal.	1,677.50 993.75 2,671.25
---	---	--------------------------------

Gennett Lumber Company Liquid Noxtane SS 1	Marion, N.C. 6 X 55 Gal.	2,013.00
---	-----------------------------	----------

Jefferson Wood Products Santobrite Super Noxtane	W. Jefferson, N.C. 20 X 100 # 20 X 50 #	1,240.00 470.00 1,710.00
--	---	--------------------------------

Vaughan Bassett Furn. Liquid Noxtane SS 1	Galax, Virginia 5 X 55 Gal.	1,677.50
--	--------------------------------	----------

Balance of Shipments	6 Sales	3,340.50
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TOLS004862

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

-2-

From R. F. Simmons

Location \_\_\_\_\_

Date April 30, 1975

3. Conley, Georgia Warehouse  
2 Sales total for month

2,500.30

4. Newark, California Warehouse - By Customer

Munnell & Sherrill  
Liquid Noxtane SS 1  
Clear End Sealer

Total \$ 20,478.15

Eugene, Oregon  
38 X 55 Gal. 9,770.75  
4 X 55 Gal. 308.55

10,079.30

Snider Lumber  
Liquid Noxtane SS 1

Turlock, California  
20 X 55 Gal. 6,215.00

Vaughan-Basset Furn  
Liquid Azide 200

Galax, Virginia  
5 X 55 Gal. 1,897.50

E. B. Yancey Lumber  
Liquid Noxtane SS 1  
Liquid Azide 200

Madera, California  
3 X 55 Gal. 1,006.50  
1 X 55 Gal. 374.00

1,380.50

Munnell & Sherrill  
Liquid Noxtane SS 1

Ukiah, California  
3 X 55 Gal. 1,905.85

5. Tuscaloosa, Alabama Blender - By Customer

Woodtox 140 R T U Bulk

Total 6,420.35

Cottondale Wood Products  
Tuscaloosa, Alabama

1637 Gals.

1,309.60

Holman Wood Products  
Northport, Alabama

2675 Gals.

2,140.00

TOLS004863

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmona

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 30, 1975

-3-

### Tuscaloosa, Alabama Blender - By Customer Continued

Norman Treating Co.			
Goshen, Alabama	3495 Gals.		2,970.75

### 6. Cotton Valley, Louisiana Blender - By Customer

Woodtox 140 R T U Bulk	Total	29,658.20
------------------------	-------	-----------

Commercial Box and Lumber		
Texarkana, Texas	12167 Gals.	10,341.95

Texas Container and Box		
Texarkana, Texas	6338 Gals.	5,387.30

Ward Davis Inc.		
Texarkana, Texas	4090 Gals.	3,476.50

Mulberry Lumber Co.		
Mulberry, Arkansas	6180 Gals.	5,253.00

F & M Corp.		
Caney, Kansas	6117 Gals.	5,199.45

### 7. Portland, Oregon Blender - By Customer

Total	4,989.88
-------	----------

Morris Lumber	Grants Pass, Oregon	
Timbertox 40 Conc.	4 X 55 Gal.	825.00

J. H. Baxter	Eugene, Oregon	
Petroset II	10 X 460 #	3,542.00
Anstrik Green	2 X 55 Gal.	363.00
		3,905.00

TOLS004864

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 30, 1975

-4-

### Portland, Oregon Blender - By Customer Continued

Munnell & Sherrill  
Woodtox 140 R T U

Ukiah, California  
3 X 55 Gal.

259.88

### 8. St. Louis, Missouri

Penta (Calendar Month)

LBS

F P D Plants  
Customers  
W T C

529,764  
317,464  
62,029

Total 909,257

### W T C Products - Major Shipments - By Customer

Merck & Co.  
Top Form Fence Guard

Rahway, N. J.  
1212 X 4 X 1 Gal.

10,859.52

Kentucky Mine Supply  
Santobrite  
Super Noxtane  
Timbertreat 625  
Timbertreat 625

Harlan, Kentucky  
40 X 100 #  
360 X 50 #  
35 X 5 Gal.  
10 X 55 Gal.

2,080.00  
7,128.00  
748.13  
2,227.50

12,183.63

Weyerhaeuser Company  
S P S 30% Solution

Craig, Oklahoma  
8942 Gal.

10,372.72

Webb & Sons Inc.  
WR 340 Conc.

Sherburne, N. Y.  
54 X 408 #

3,723.41

TOLS004865

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 30, 1975

-5-

### W T C Products - Major Shipments - By Customer Continued

E T C Chemical Co.	Hattiesburg, Mississippi	
Liquid Noxtane SS 1	2 X 55 Gal.	544.50
Timbertreat 625	2 X 55 Gal.	400.95
Lumbrella 33 Cherry Tone	162 X 3 Gal.	2,646.27
Lumbrella 33 Yellow	108 X 3 Gal.	1,764.18
		<u>5,355.90</u>
Milan Box Company	Milan, Tennessee	
Woodtox 140 RTU	6006 Gal.	5,105.10
Bennett Box Company	Clinton, Iowa	
Woodtox 140 R T U	9710 Gal.	8,253.50
Crestline	Wausau, Wisconsin	
Woodtox Pre Prime RTU	8113 Gal.	6,652.66
Northern Sash	Hawkins, Wisconsin	
Woodtox Pre Prime RTU	4062 Gal.	3,330.84
Hurd Millwork	Medford, Wisconsin	
Woodtox Pre Prime RTU	4061 Gals.	3,330.02
Malta Mfg. Co.	Malta, Ohio	
Woodtox Pre Prime RTU	5947 Gal.	4,876.54
Indiana Creosoting	Bloomington, Indiana	
Timbertox D-5	5919 Gal.	3,669.78
R. J. Bind Lumber	Carmi, Illinois	
Timbertox D-5	5696 Gal.	3,531.52

TOLS004866

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date April 30, 1975

-6-

### Balance of Shipments - By Product

Woodtox 140 Conc.	1 X 55 Gal.	170.50
Woodtox PrePrime RTU	18 X 55 Gal.	1,699.50
Woodtox 152	7 X 55 Gal.	737.00
Woodtox R T U	42 X 5 Gal.	306.00
Penta Wood Pres. Conc.	17 X 55 Gal.	3,646.50
Penta Wood Pres. Conc.	51 X 5 Gal.	1,128.75
Penta Wood Pres. Conc.	1 X 6 X 1 Gal.	29.70
Penta Wood Pres. RTU	1 X 55 Gal.	77.00
Penta Wood Pres. RTU	30 X 5 Gal.	317.50
Penta Wood Pres. RTU	6 X 6 X 1 Gal.	1,193.10
WR 340 Conc.	16 X 408 #	1,057.54
Liquid Noxtane SS 1	1 X 55 Gal.	335.50
KLB Beam Sealer	12 X 55 Gal.	1,188.00
Clear End Sealer	4 X 55 Gal.	594.00
WoodSeal Wax	5 X 40 #	100.00
Blue Anstrik Conc.	1 X 5 Gal.	150.00
B Wood Pres.	2 X 5 Gal.	16.50
B Wood Pres.	18 X 6 X 1 Gal.	259.20
Timbertreat 625	1 X 55 Gal.	280.50
Timbertreat 95	2 X 30 Gal.	336.00
Penta Stain # 502	3 X 5 Gal.	61.50
Penta Stain # 506	2 X 5 Gal.	41.00
Penta Stain # 507	20 X 5 Gal.	410.00
Penta Stain # 509	2 X 55 Gal.	385.00
WTC # 71	5 X 515 #	1,740.70
Super Noxtane	60 X 50 #	1,298.00
Super Noxtane Test Kit	1 Each	35.88
Polelife T.F.	20 X 50 #	510.00
Polelife Tags and nails	10 Lots	77.75
Polykraft Paper Blk.	4 Rolls	33.00
Woodtreat AA	10 X 40 #	228.00

TOLS004867

BZTO104(e)041688

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 30, 1975

-7-

### Penta Invoicing for April Accounting Month

Koppers Plants	\$ 149,710
Customers	\$ 97,870
Total	247,580

April 1974	\$ 343,716
------------	------------

- \$ 96,136

WTC Products	\$ 184,462
--------------	------------

April 1974	\$ 314,243
------------	------------

- \$ 129,781

### II. Raw Materials

Co-solvents. No replacement yet available for WK-55; no problem in supply of KB-3, B-6 and Oxo Bottoms. Eastman will cut off the low ends of B-6 to make co-solvent meeting the new federal spec. for Ammo boxes; cost not established yet. Initial lab work indicates improved solvency and less tendency for solution discoloration because of the penta-iron complex.

Cost. No increases this month. Penta decreased .017 lb., mineral spirits decreased .02 lb in lower grades (not low end point or E.C. material).

Availability. Have encountered no shortages.

### III. Inventory

Using dollar raw material purchases to evaluate against that figure converted to finished goods, we estimate about \$ 90,000 inventory reduction in April; this should leave W T C with approximately \$ 710,000 in inventory.

TOLS004868

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date April 30, 1975

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### IV. Profit Opportunities

Initial guess-timates look like about 70¢/gal. cost saving on Lumbrella 33 with the new installation, but we really can't evaluate very well yet, having needed only to make two batches of product since completion of the work.

35,000 gallon of Woodtox 140 was shipped from Cotton Valley this month and sales increased late in the month from St. Louis and Tuscaloosa; this business looks better for May.

Millwork solution sales (Woodtox PrePrime) continue at a good level. Liquid Noxtane and Lumbrella from St. Louis are very sluggish. Pigment and water system for Weyerhaeuser (for Lumbrella substitute) according to Oscar Martin was fine; it gives color only, no organism control and no water repellancy.

Sales on the West Coast, both at Newark and Portland continue in the doldrums.

### V. Assistance Requirements

Practically the same requests as March:

1. Research study in effort to eliminate high price components in Liquid Noxtane and Lumbrella.
2. Continue 'Hard Sell' in our markets.
3. Please, won't someone in Pittsburgh do work on WK-55 replacement?
4. Ditto - Overhead burden distribution study. Only a beginning was made!
5. Inventory computerization - nothing done to date.

TOLS004869

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date April 30, 1975

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### VI. General Comments

Sales forecast for May              Penta \$400,000  
    WTC \$250,000

We are continuing to look for a blender or bulk station in the Minnesota-Wisconsin area.

According to corporate traffic's interpretation of D.O.T. regulations we cannot use nor adapt our present West Coast tote bins to ship Liquid Noxtane after July 1; our alternative is get the flashpoint of the product above 100°F. ('Flammable' classification)

### VII. Travel

None in April

May 1 & 2    1 1/2 days vacation

May 13 - 15    Minnesota and Wisconsin

May 22 & 23    Chicago, American Mineral Spirits and  
    Rheem Mfg. Company

R. F. Simmons

RFS/sjk

TOLS004870

# KOPPERS

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 → J. M. Montgomery  
 D. F. Taylerson

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report - May 1975  
Wood Treating Chemicals

Date May 27, 1975

### I. Shipment Highlights - May Accounting Month -

1. Camden, New Jersey Warehouse  
 15 Sales Total for Month

\$ 10,202.00

2. Enfield, North Carolina Warehouse - By Customer

Flack-Jones Lumber	Summerville, North Carolina	
Lumbrella 12 Red/Brown	15 X 53 Gal.	\$ 2,822.20
Link Taylor Corporation	Lexington, North Carolina	
Liquid Noxtane SS1	10 X 55 Gal.	\$ 3,190.00
Coastal Lumber Company	Weldon, North Carolina	
Liquid Noxtane SS1	2 X 55 Gal.	671.00
Timbertreat 625	2 X 55 Gal.	561.00
		\$ 1,232.00

Putman County Lumber	Monterey, Tennessee	
Super Noxtane	20 X 50 #	470.00
Timbertreat 625	2 X 55 Gal	561.00
		\$ 1,031.00

Balance of Shipments	7 Sales	\$ 3,015.10
----------------------	---------	-------------

3. Conley, Georgia Warehouse  
 5 Sales Total

\$ 6,690.40

4. Newark, California Warehouse - By Customer

Snider Lumber Products	Turlock, California	
Liquid Noxtane SS1	20 X 55 Gal.	\$ 6,215.00

TOLS004871

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date May 27, 1975

Page 2

### Newark, California Warehouse - By Customer Continued

PBM Supply	Chico, California	
Liquid Noxtane SS1	44 X 55 Gal.	\$ 11,313.5
E. B. Yancy Lumber Co.	Medera, California	
Liquid Noxtane SS1	3 X 55 Gal.	1,006.5
Liquid Azide 200	1 X 55 Gal.	<u>379.5</u>
		\$ 1,386.0
Munnell & Sherrill	Arcata, California	
Liquid Noxtane SS1	1 X 345 Gal.	1,612.8
Liquid Noxtane SS1	8 X 55 Gal.	2,057.0
Liquid Azide 200	1 X 55 Gal.	299.2
Clear End Sealer	1 X 300 Gal.	420.7
Clear End Sealer	6 X 55 Gal.	462.8
Blue End Sealer	3 X 55 Gal.	259.4
Orange End Sealer	10 X 55 Gal.	<u>864.8</u>
		\$ 3,977.0

### 5. Tuscaloosa, Alabama Blender - By Customer

#### Woodtox 140 R TU Bulk

Tusco Wood Products		
Tuscaloosa, Alabama	7948 Gal.	6,358.4
Holman Wood Products		
Northport, Alabama	540 Gal.	432.0

### 6. Cotton Valley, Louisiana Blender - By Customer

#### Woodtox 140 R TU Bulk

Lear Sigler Corporation		
Arcadia, Louisiana	7985 Gal.	6,787

TOLS004872

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 27, 1975

Page 3

### Cotton Valley, Louisiana Blender - By Customer Continued

Mulberry Lumber Company Clarksville, Texas	5124 Gals.	4,150.4
Commercial Box Texarkana, Texas	6017 Gals.	5,114.4
F & M Corporation Caney, Kansas	5954 Gals.	5,060.9
Texas Container Texarkana, Texas	5954 Gals.	5,060.9

### 7. Portland, Oregon Blender - By Customer

Valk Wholesaler Lumber Woodtox 140 Conc.	Riverside, California 10 X 55 Gal.	1,595.0
Cascade Ind. Supply Woodtox Pre Prime RTU	Klamath Falls, Oregon 3027 Gals.	2,724.3
Jasco Chemical Co. Woodtox 140 Conc.	Mt. View, California 3019 Gals	4,981.3
Beaver Lumber Co. Woodtox 140 R TU	Santa Clara, California 2028 Gals.	1,723.8
Jeld Wen, Inc. Woodtox 140 R TU	Flagstaff, Arizona 7013 Gals	7,382.5
Kinnear Door Woodtox 140 R TU	Centraillia, Washington 10 X 55 Gals.	852.5

TOLS004873

BZTO104(e)041694

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date May 27, 1975

Page 4

### Portland, Oregon Blender - By Customer Continued

Great Western Woodtox 140 R TU	Seattle, Washington 2061 Gals.	1,664.2
Gilsonite, Inc. Redy Coat Penta Conc.	Portland, Oregon 20 X 55 Gal.	2,530.0

### 8. St. Louis, Missouri

Penta (Calendar Month) May

F P D Plants	117, 951
Customers	347, 271
W T C	106, 292
Total	571, 514 #

### W T C Products - Major Shipments - By Customer

Bennett Box Company Woodtox 140 R TU	Centreville, Iowa 10, 030 Gals.	8,525.50
J. R. Ginn & Company, Inc. Woodtox 140 R TU	St. Louis, Missouri 4, 177 Gals.	3,550.45
Milan Box Company Woodtox 140 R TU	Milan, Tennessee 5876 Gals	4,994.60
Bennett Box Company Woodtox 140 R TU	Clinton, Iowa 4903 Gals.	4,167.55
Northern Sash & Door Woodtox PrePrime R TU	Hawkins, Wisconsin 3975 Gals.	3,259.50

TOLS004874

BZTO104(e)041695

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 27, 1975

Page 5

### W T C Products - Major Shipments - By Customer Continued

Crestline Woodtox PrePrime R TU	Wausau, Wisconsin 6065 Gals.	4,973.30
Hurd Millwork Co. Woodtox PrePrime R TU	Medford, Wisconsin 4047 Gals.	3,318.54
Lincoln Wood Products Woodtox PrePrime R TU	Merrill, Wisconsin 5923 Gals.	4,856.86
Weather Shield Mfg. Woodtox PrePrime R TU	Ladysmith, Wisconsin 4030 Gals.	3,304.60
Weather Shield Mfg. Woodtox PrePrime R TU ]	Medford, Wisconsin 4037 Gals.	3,310.34
Vetter Mfg. Company Woodtox PrePrime R TU	Stevens Point, Wisconsin 2381 Gals.	1,952.42
W. M. Barr & Company Woodtox PrePrime Conc.	Memphis, Tennessee 3951 Gals.	7,467.39
Knapheide Mfg. Co. Woodtox 152 R TU	Quincy, Illinois 5913 Gal.	7,686.90
R. J. Bond, Inc. Timbertox D-5	Carmi, Illinois 5743 Gals.	3,560.66
Asplundh Tree Expert Poletox Penta Wood Pres. Conc.	Willow Grove, Pennsylvania 26200# 2 X 55 Gals.	13,100.00 396.00
		\$ 13,496.00

TOLS004875

BZTO104(e)041696

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date May 27, 1975

Page 6

### W T C Products - Major Shipments - By Customer Continued

Webb & Son, Inc. WR 340 Conc.	Sherburne, New York 28 X 408 #	1,942.08
Merck Chemical Fence Guard	Rahway, New Jersey 1559 X 4 X 1 Gal.	12,910.12
Yawkey Bissell Super Noxtane	White Lake, Wisconsin 760 X 50 #	15,048.00
S & W Sawmills Lumbrella 15 Redwood	Darby, Montana 44 X 53 Gals.	8,395.20
Cands Lumber Co. Lumbrella 15 Yellow	Elizabeth City, North Carolina 15 X 53 Gals.	3,021.00
Georgia-Pacific Corp. Lumbrella 33 Yellow	Ahoskie, North Carolina 162 X 3 Gals.	2,940.30
Intermountain Lumber Co. Lumbrella 15 Redwood Liquid Noxtane SS1	Salmon, Idaho 16 X 53 Gals. 1 X 55 Gals.	3,052.80 <u>302.50</u> <u>\$ 3,355.30</u>
Ralph Hamel Forest Prod. Super Noxtane	Vesper, Wisconsin 100 X 50 #	2,300.00
Crown Chemicals Timbertreat 625	St. Louis, Missouri 12 X 55 Gals.	3,102.00

TOLS004876

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 27, 1975

Page 7

### W T C Products - Major Shipments - By Customers Continued

GSA	Kansas City, Missouri	
Wood Pres. Linseed Oil	90 X 5 Gal	907.92
Wood Pres. Linseed Oil	24 X 55 Gal	1,920.60
Wood Pres. Alkyd Resin	36 X 5 Gal	363.17
		\$ 3,191.69

Amsco Div.	Minneapolis, Minnesota	
Penta Wood Pres. R TU	3 X 55 Gal.	189.75
Penta Wood Pres. R TU	50 X 6 X 1 Gal.	795.00
Penta Wood Pres. R TU	30 X 5 Gal.	277.50
Penta Wood Pres. Conc.	60 X 6 X 1 Gal.	1,746.00
Penta Wood Pres. Conc.	50 X 5 Gal.	1,025.00
Penta Wood Pres. Conc.	5 X 55 Gal.	990.00
Woodtox R TU	3 X 55 Gal.	247.50
Woodtox R TU	75 X 5 Gal.	843.75
Woodtox R TU	175 X 6 X 1 Gal.	2,992.50
		\$ 9,107.00

### Balance of Shipments By Product

Woodtox Pre Prime Conc.	5 X 55 Gal.	907.50
Woodtox 152 R TU	7 X 55 Gal.	770.00
Woodtox Pre Prime R TU	1 X 55 Gal.	101.75
Woodtox R TU	8 X 5 Gal.	102.00
Woodtox R TU	44 X 6 X 1 Gal.	792.00
Penta Wood Pres. RTU	500 Gal.	320.00
Penta Wood Pres. RTU	57 X 5 Gal.	636.25
Penta Wood Pres. RTU	48 X 6 X 1 Gal.	748.80
Penta Wood Pres. Conc.	15 X 55 Gal.	3,212.00
Penta Wood Pres. Conc.	15 X 5 Gal.	337.50
Penta Wood Pres. Conc.	15 X 6 X 1 Gal.	445.50
B Wood Pres.	2 X 55 Gal.	137.50

TOLS004877

BZTO104(e)041698

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 27, 1975

Page 8

### Balance of Shipments By Product Continued

B Wood Pres.	51 X 6 X 1 Gal.	734.40
Wood Seal Wax	5 X 40 #	100.00
K L B Beam Sealer	12 X 55 Gal.	1,188.00
Clear End Sealer	2 X 55 Gal.	297.00
Rcd End Sealer	1 X 55 Gal.	162.25
Timbertreat 625	2 X 55 Gal.	561.00
Liquid Noxtane SS 1	4 X 55 Gal.	1,342.00
Lumbrella 33 Cherrytone	54 X 3 Gal.	1,036.80
Super Noxtane	112 X 50 #	2,583.80
Santobrite	8 X 50 #	244.00
WT AA	20 X 40 #	456.00
Penta Stain 502	2 X 5 Gal.	41.00
Penta Stain 502	20 X 4 X 1 Gal.	268.00
Penta Stain 506	10 X 4 X 1 Gal.	184.00
Penta Stain 506	2 X 12 X 1 Qts.	440.00

### Penta Invoiced for May Accounting Month:

Koppers Plants	\$ 174,497
Customers	<u>\$ 121,693</u>
Total	\$ 296,190
May 1974	\$ 369,237
	- \$ 73,047

W T C Products	\$ 277,439
May 1974	\$ 345,503

- \$ 68,064

TOLS004878

BZTO104(e)041699

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date May 27, 1975

Page 9

### II. Raw Materials

No change in status of co-solvents. We expect to have solvent from Eastman in July to meet the new federal box specification.

Some changes in costs encountered in May, these went up:

Chevron 400	.065/Gal. (Medium Aromatic Solvent)
GAF Yellow Pigment	.07/Lb.
Oil Base Pigments	.05 ~ .10/Lb.
Santolene C	.09/Lb.
WTC 71 & 74	.05/Lb.

These went down:

Fuel Oil	.02/Gal.
Lanvar	.01/Lb.
Tall Oil Fatty Acid	.02/Lb.

No Material Shortages.

### III. Inventory

It is estimated a further reduction of \$60,000 was made in May. Several items of question about inventory value as listed by computer report are being investigated by Frank Klasnick. Our June closing physical will get a correct figure.

### IV. Profit Opportunities

Woodtox 140 Sales got even worse in the South; only 8500 gallons from Tuscaloosa and 31,000 gallons from Cotton Valley were sold in May. St. Louis sales held up in the beginning of the month, but none are being made now. Rumors and price cutting by competition persist in the South.

TOLS004879

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date May 27, 1975

Page 10

Millwork solution sales (Preprime) were good - 32,000 gallons RTU, 4,000 gallons concentrate.

Minor sales improvement was made in Lumbrella, preservative grease and Penta Wood Preservative.

### V. Assistance Requirements

Same as April - we see no change in status on our previous requests, except in the area of improved WTC product sales.

### VI. General Comments

Sales Forecast for June	Penta	\$ 330,000
	W T C	\$ 250,000

Monsanto has verbally informed us that on expiration of the Santobrite contract 3/31/76, they will no longer be securing it from Dow to resell to us. As Dow is now the sole producer, we should soon start negotiating with them.

Our Liquid Noxtane SS1 formulation is now changed dropping acetone as a component, thus raising the product flash point above 100°F and eliminating the D.O.T. shipping restrictions.

### VII. Travel

June 2 - 7            Jones-Hamilton, Newark, CA Blender - and Suppliers.

June 17 - 20        Wisconsin and Minnesota

R. F. Simmons

RFS/sjk

TOLS004880

# KOPPERS

## Intercifice Correspondence

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery  
 D. F. Taylerson

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report - June 1975  
Wood Treating Chemicals

Date July 3, 1975

### I. Shipment Highlights - June Accounting Month

#### 1. Camden, New Jersey Warehouse

Bruning Paint Company	Baltimore, Maryland	
Penta Wood Pres. Conc.	5 X 55 Gal.	1,086.25
Commonwealth of Virginia	Cumberland, Virginia	
Penta Wood Pres. Conc.	10 X 55 Gal.	1,815.00
Balance of Shipments	9 Sales	2,531.20

#### 2. Enfield, North Carolina Warehouse

Union Camp Corp	Franklin, Virginia	
Lumbrella 33 Redwood	108 X 3 Gal	2,446.20
W. H. Sheffield Lumber	Suffolk, Virginia	
Lumbrella 15 Redwood	4 X 53 Gal	869.20
Liquid Noxtane SS1	4 X 55 Gal	1,342.00
		2,211.00
Koppers Company, Inc.	Battleboro, North Carolina	
Liquid Noxtane SS1	6 X 55 Gal.	2,013.00
Timbertreat 625	3 X 55 Gal.	841.50
		2,854.50
Balance of Shipments	8 Sales	4,200.25

TOLS004881

BZTO104(e)041702

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 2

### 3. Conley, Georgia Warehouse

Georgia Pacific Corp. Lumbrella 33 Yellow	Monticello, Georgia 135 X 3 Gal.	2,895.75
Union Camp Corp. Lumbrella 33 Yellow	Folkston, Georgia 189 X 3 Gal.	3,589.11
Georgia Pacific Corp. Lumbrella 33 Yellow	Warrenton, Georgia 81 X 3 Gal	1,530.90
Union Camp Corp. Lumbrella 33 Yellow	Meldrim, Georgia 162 X 3 Gal.	3,081.24
Cordele Sash & Door Liquid Noxtane SS 1	Cordele, Georgia 10 X 55 Gal.	3,190.00
Georgia Pacific Corp. Lumbrella 33 Yellow Green End Spray 400	Varnville, South Carolina 216 X 3 Gal. 1 X 55 Gal.	3,920.40 316.25
Holly Hill Lumber Company Lumbrella 33 Yellow	Walterboro, South Carolina 54 X 3 Gal.	1,158.30
Flack Jones Lumber Liquid Noxtane SS 1	Summerville, South Carolina 5 X 55 Gal.	1,677.50
Georgia Pacific Corp. Lumbrella 33 Yellow	Russellville, South Carolina 135 X 3 Gal.	2,450.25
Balance of Shipments	4 Sales	2,171.85

TOLS004882

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 3

### 4. Newark, California Warehouse

Cascade Ind. Supply	Klamath Falls, Oregon	
Liquid Noxtane SS1	4 X 355 Gal.	6,451.50
Liquid Noxtane SS1	12 X 55 Gal.	3,085.50
Liquid Azide 200	6 X 55 Gal.	<u>1,795.20</u>
		11,332.20

Capital Ind. Supply	Salem, Oregon	
Liquid Azide 200	3 X 55 Gal.	967.75

E. B. Yancey	Madera, California	
Liquid Noxtane SS1	2 X 55 Gal.	671.00
Clear End Sealer	1 X 55 Gal.	<u>107.25</u>
		778.25

Elkins Furniture Company	Elkins, North Carolina	
Liquid Azide 200	5 X 55 Gal.	2,007.50

Reliable Hardware	Arcata, California	
Liquid Noxtane SS1	21 X 55 Gal.	5,399.60
Liquid Noxtane SS1	2 X 345 Gal.	3,225.75
Liquid Azide 200	2 X 55 Gal.	598.40
Clear End Sealer	2 X 55 Gal.	154.25
Blue End Sealer	2 X 55 Gal.	172.90
Orange End Sealer	2 X 55 Gal.	<u>172.90</u>
		9,724.00

Great Western Chemical	Seattle, Washington	
Red End Sealer	5 X 55 Gal.	605.00

Snider Lumber Company	Turlock, California	
Liquid Noxtane SS1	20 X 55 Gal.	6,215.00

TOLS004883

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 4

### 5. Tuscaloosa, Alabama - Blender

#### Woodtox 140 R TU - Bulk

Tusco Wood Prod.	Tuscaloosa, Alabama	
	7919 Gals	6,335.20
Holman Wood Products	Northport, Alabama	
	532 Gals	425.60

### 6. Cotton Valley, Louisiana - Blender

#### Woodtox 140 R TU - Bulk

Commercial Box	Texarkana, Texas	
	6088 Gals.	5,174.80
Wood Pallet Inc.	Dubach, Louisiana	
	2155 Gals	1,831.75
Leggett Lumber Company	Livingston, Texas	
	4816 Gals	4,093.60

### 7. Portland, Oregon Blender

Cascade Ind. Supply	Klamath Falls, Oregon	
Woodtox PrePrime R TU	50 X 55 Gal.	3,506.25
Woodtox 140 R TU	50 X 55 Gal.	3,272.50
Woodtox PrePrime R TU	1461 Gals.	1,314.90
		8,093.65

Permapost Products	Hillsboro, Oregon	
WR 340 Conc.	21 X 408 #	2,276.64

TOLS004884

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 5

### Portland, Oregon Blender Continued

Jeld Wen Company Woodtox 140 R T U	Flagstaff, Arizona 7054 Gals.	7,406.70
Time Oil Company Timbertox 140 Conc.	Portland, Oregon 1000 Gals.	1,790.00
Great Western Timbertox 40 Conc.	Spokane, Washington 2980 Gals.	6,854.00
Arcata Redwood Woodtox PrePrime R T U	Arcata, California 3321 Gals.	2,988.90
West Coast Mills Woodtox 140 R T U	Chehalis, Washington 905 Gals.	769.25
Great Western Chem. Timbertox 40 Conc.	Seattle, Washington 3 X 55 Gal.	556.88

### 8. St. Louis, Missouri

Penta (Calendar Month). June

F PD Plants	644,368 Lbs.
Customers	211,019
W T C	<u>82,000</u>
Total	937,387 Lbs.

### W T C Products - Major Shipments

Fluor Utah Penta Wood Pres. RTU	San Mateo, California 720 X 55 Gal.	45,540.00
------------------------------------	--	-----------

TOLS004885

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 6

### W T C Products - Major Shipments Continued

Weyerhaeuser Company Liquid Noxtane SS 1	Lewiston, North Carolina 52 X 55 Gal.	15,730.00
Weyerhaeuser Company SPS 30% Solution	Craig, Oklahoma 10138 Gal.	11,760.08
Merck & Company Top Form Fence Guard	Rahway, New Jersey 8993 Gal.	17,060.61
Wm. Barr Company Woodtox PrePrime Conc.	Memphis, Tennessee 3989 Gal.	7,539.21
Malta Mfg. Company Woodtox PrePrime R TU	Malta, Ohio 5374 Gal.	4,406.68
Wabash Inc. Woodtox PrePrime R TU	Memphis, Tennessee 4030 Gal.	3,304.60
Crestline Woodtox PrePrime R TU	Wausau, Wisconsin 11992 Gal.	9,833.44
Northern Sash Woodtox PrePrime R TU	Hawkins, Wisconsin 3998 Gal.	3,278.36
Hurd Millwork Woodtox PrePrime R TU	Medford, Oregon 3983 Gal.	3,266.06
Rockdale Sash & Trim Woodtox PrePrime R TU	Joliet, Illinois 4022 Gal.	3,298.04
Bennett Box Company Woodtox 140 R TU	Centreville, Iowa 9939 Gal.	8,448.15

TOLS004886

BZTO104(e)041707

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 7

### W T C Products - Major Shipments Continued

Milan Box Company Woodtox 140 R TU	Milan, Tennessee 6021 Gal.	5,117.85
Bennett Box Company Woodtox 140 R TU	Clinton, Iowa 4902 Gal.	4,166.70
St. Louis Paint Company Penta Wood Pres. Conc.	St. Louis, Missouri 2182 Gal.	5,345.90
Van Horn & Metz. Penta Wood Pres. Conc.	Conshohocken, PA 20 X 55 Gal.	3,762.00
Savagran Company Woodtox S Conc.	Addison, Illinois 10 X 55 Gal.	1,410.75
Penn Central R R Timbertox D-5	Philadelphia, Pennsylvania 80 X 55 Gal.	4,400.00
Penn Central M T A Timbertox D-5	New York, New York 17 X 55 Gal.	1,262.25
R. J. Bond Timbertox D-5	Carmi, Illinois 5641 Gal.	3,497.42
Indiana Harbor Belt R.R. Timbertox D-5	Hammond, Indiana 37 X 55 Gal.	2,543.75
Phenix Mfg. Company Woodset 310 Conc.	Shawano, Wisconsin 11 X 55 Gal.	2,541.00

TOLS004887

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 8

### W T C Products - Major Shipments Continued

Turner Supply	Mobile, Alabama	
Super Noxtane	380 X 50 #	7,524.00
Santobrite	50 X 100 #	2,600.00
Timbertreat 625	2 X 55 Gal.	<u>445.50</u>
		10,569.50
Canton Chemical	Canton, North Carolina	
WR 340 Conc.	1 X 408 #	77.52
Penta Wood Conc.	10 X 55 Gal.	<u>1,881.00</u>
		1,958.52
Madison Wood Pres.	Madison, Virginia	
Woodtox R TU	10 X 6 X 1 Gal.	180.00
Penta Wood Pres. Conc.	15 X 6 X 1 Gal.	445.50
Woodtox 152 R TU	1 X 55 Gal.	110.00
Penta Stain 502	15 X 4 X 1 Gal.	276.00
Penta Stain 504	10 X 4 X 1 Gal.	184.00
Penta Stain 507	10 X 4 X 1 Gal.	<u>184.00</u>
		1,379.50
E T C Chemical	Hattiesburg, Mississippi	
Lumbrella 33 Cherrytone	270 X 3 Gal.	4,410.45
Lumbrella 33 Yellow	216 X 3 Gal.	3,528.36
Green End Spray 400	2 X 55 Gal.	<u>569.25</u>
		8,508.06
Southern Wood Piedmon	Wilmington, North Carolina	
W T C 71	3 X 515 #	1,344.15
Asplundh Tree Expert	Willow Grove, Pennsylvania	
Poletox	49 X 60 # Drums	1,675.80

TOLS004888

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 9

### W T C Products - Major Shipments Continued

Georgia Pacific Lumbrella 33 Yellow	Whiteville, North Carolina 324 X 3 Gal.	5,880.6
Georgia Pacific Lumbrella 33 Yellow	Varnville, South Carolina 54 X 3 Gal.	980.1
Dean & Barry Company Woodtox R TU Woodtox R TU Penta Wood Pres. Conc.	Columbus, Ohio 20 X 5 Gal. 28 X 6 X 1 Gal. 12 X 6 X 1 Gal.	255.0 504.0 <u>365.4</u>  <u>1,115.4</u>
Crown Chemicals Penta Wood Pres. Conc. Timbertreat 625 Penta Stain 508 Penta Stain 506 Woodtox R TU Penta Wood Pres. RTU	St. Louis, Missouri 10 X 6 X 1 Gal. 2 X 55 Gal. 1 X 4 X 1 Gal. 20 X 4 X 1 Gal. 20 X 6 X 1 Gal. 20 X 6 X 1 Gal.	267.6 561.0 16.5 331.2 324.0 <u>280.8</u>  <u>1,781.1</u>
Koppers Company, Inc. Liquid Noxtane SS1 Timbertreat 625	Battleboro, North Carolina 6 X 55 Gal. 3 X 55 Gal.	2,013.0 <u>841.5</u>  <u>2,854.5</u>

TOLS004889

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmone

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 10

### Balance of Shipments

Woodtox 140 Conc.	2 X 55 Gal.	341.00
Woodtox 152 R TU	8 X 55 Gal.	880.00
Woodtox PrePrime Conc.	5 X 55 Gal.	907.50
Woodtox PrePrime R TU	15 X 55 Gal.	1,507.00
Woodtox R TU	2 X 55 Gal.	321.75
Woodtox R TU	4 X 5 Gal.	51.00
Woodtox R TU	14 X 6 X 1 Gal.	252.00
Penta Wood Pres. Conc.	11 X 55 Gal.	2,370.50
Penta Wood Pres. Conc.	52 X 5 Gal.	1,018.50
Penta Wood Pres. Conc.	37 X 6 X 1 Gal.	843.90
Penta Wood Pres. R TU	250 Gal.	160.00
Penta Wood Pres. R TU	8 X 55 Gal.	671.00
Penta Wood Pres. R TU	10 X 6 X 1 Gal.	156.00
Timbertreat 625	2 X 55 Gal.	561.00
Timbertreat 625	2 X 30 Gal.	312.00
Timbertreat 625	2 X 5 Gal.	53.50
B Wood Pres.	38 X 6 X 1 Gal.	546.60
B Wood Pres.	1 X 5 Gal.	7.75
Liquid Noxtane SS 1	4 X 55 Gal.	1,308.40
Clear End Sealer	1 X 55 Gal.	148.50
Clear End Sealer	5 X 5 Gal.	78.75
W T C # 71	2 X 55 Gal.	937.30
Super Noxtane	4 X 50 #	100.00
Woodtreat AA	90 Tubes	378.00
Woodseal Wax	5 X 40 #	100.00
Penta Stain # 502	7 X 5 Gal.	154.75
Penta Stain # 502	25 X 4 X 1 Gal.	460.00
Penta Stain # 503	3 X 5 Gal.	61.50
Penta Stain # 504	1 X 55 Gal.	206.25
Penta Stain # 506	18 X 4 X 1 Gal.	331.20
Liquid Noxtane Test Kit	1 Each	21.00

TOLS004890

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date July 3, 1975

Page 11

### Penta Invoiced For June Accounting Month:

Koppers Plants	\$ 259,751	
Customers	<u>102,928</u>	(-\$ 80,000 June '74)
Total	\$ 362,679	
June 1974	272,763	
		+ \$ 89,916
W T C Products	358,896	
June 1974	<u>235,199</u>	
		+ \$ 123,697

### II. Raw Materials

No shortages, except one created by Hercules only having a stock of off-spec yellow lumbrella pigment and being unable to furnish more for an anticipated 3 weeks; this puts us in a poor supply situation on lumbrella, as there is no alternate pigment. Don Weimer is helping push Hercules; in the meantime, we have no alternative but wait. There is need for an alternate pigment.

### Following cost increases in June:

Lithium Hydroxide	.15/LB.
Mineral Spirits - St. Louis	.02/Gal.
Mineral Spirits - Cotton Valley	.015/Gal.
Fuel Oil	.018/Gal.

Working to put the Eastman co-solvent made to meet the new federal spec. under exclusive contract; preliminary talk is favorable.

TOLS004891

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date July 3, 1975

Page 12

### III. Inventory

June inventory evaluation for WTC operations was a disappointing \$ 760,813, and we were at rock bottom supply on most raw materials. Finished goods inventory will be reduced and we must have good monthly forecasting by sales territory to aid in reducing the finished inventory.

### IV. Profit Opportunities

Customer penta sales are falling; somehow this has to be stimulated. By mid-July a new report will be issued to update the accounts we are losing. With oil costs increasing due to rising crude and tariffs, it is not the time to think about strong concentrate advances.

New ammo box contracts are being let and our solution sales can only go up:

June Sales (Calendar)	Tuscaloosa	8406 Gal.
	Cotton Valley	24967 Gal.
	St. Louis	15490 Gal.

Woodtox PrePrime continues to move well, but mineral spirits increases have to be compensated by product increased.

Lumbrella sales picked up in June, but we will have to be hurt in July by the pigment shortage.

### V. Assistance Requirements

Same as April and May --- PLUS:

1. Monthly product forecasting by sales territory, two weeks prior to month end.

TOLS004892

# KOPPERS

## Interoffice Correspondence

To: R. B. Putman

From: R. F. Simmons

Location:

Location:

Subject:

Date: July 3, 1975

Page 13

### Assistance Requirements Continued

2. Continued corporate purchasing dept. aid with Hercules on the pigment.

### VI. General Comments

Our St. Louis plant labor contract was negotiated in June at approximately a 9% increase.

Acetone is reinstated back in Liquid Noxtane SS1; we are looking to corporate traffic to advise the exemption is in hand from D.O.T.

Sales Forecast for July accounting month:

Penta	\$ 260,000
W T C	\$ 275,000

### VII. Travel

June 2 - 7 Jones-Hamilton, Newark, California

July 7 - 8 - 9 Central Wisconsin, calling on Prospective blenders

July 10 - 11 Vacation

R. F. Simmons

RFS/sjk

TOLS004893

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery ←  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report July 1975  
Wood Treating Chemicals

Date August 1, 1975

### I. Shipment Highlights - July Accounting Month

1. Camden, New Jersey Warehouse			
8 Sales			\$ 1,991.25
2. Enfield, North Carolina Warehouse			
Coastal Lumber Company	Weldon, North Carolina		
Liquid Noxtane SS1	4 X 55 Gal.		1,342.00
Link Taylor Corporation	Lexington, North Carolina		
Liquid Noxtane SS1	10 X 55 Gal.		3,190.00
Corbett Lumber Co.	Willington, North Carolina		
Lumbrella 15 Yellow	3 X 53 Gal.		707.55
Liquid Noxtane SS1	10 X 55 Gal.		3,190.00
			3,897.55
Columbia Supply	Conway, South Carolina		
Lumbrella Red Brown	3 X 53 Gal.		643.95
Liquid Noxtane SS1	2 X 55 Gal.		671.00
			1,314.95
Georgia Pacific	Alcolu, South Carolina		
Santobrite	20 X 100 #		1,208.40
Timbertreat 625	2 X 55 Gal.		608.63
			1,817.03
Kirkham Lumber	Columbia, North Carolina		
Liquid Noxtane SS1	10 X 55 Gal.		3,190.00
Lumbrella 12 Red Brown	5 X 53 Gal.		993.75
			4,183.75

TOLS004894

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 2

### Enfield, North Carolina Warehouse Continued

Sheffield Lumber	Suffolk, Virginia	
Liquid Noxtane SS 1	4 X 55 Gal.	1,342.00

### Balance of shipments

Liquid Noxtane SS 1	8 X 55 Gal.	2,706.33
Santobrite	20 X 100 #	1,259.00
Lumbrella 12 Red Brown	5 X 53 Gal.	1,009.65
Lumbrella 15 Red Wood	4 X 53 Gal.	869.20
Lumbrella 33 Red Wood	54 X 3 Gal.	1,236.50
Green End Spray 400	1 X 55 Gal.	316.25
Super Noxtane	20 X 50 #	470.00

### 3. Conley, Georgia Warehouse

Cordelle Sash & Door Co.	Cordelle, Georgia	
Liquid Noxtane SS 1	10 X 55 Gal.	3,245.00

Georgia Pacific Corp.	Cross City, Florida	
Lumbrella 33 Yellow	135 X 3 Gal.	3,060.18

Union Camp Corp.	Folkston, Georgia	
Lumbrella 33 Yellow	135 X 3 Gal.	2,573.37

T & T Lumber Company	Douglas, Georgia	
Liquid Noxtane SS 1	2 X 55 Gal.	632.50
Lumbrella 33 Yellow	27 X 3 Gal.	546.75
		1,179.25

Alton Box Board Company	Whitehouse, Florida	
Liquid Noxtane SS 1	8 X 55 Gal.	2,552.00

TOLS004895

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 3

### Conley, Georgia Warehouse Continued

Union Point Lumber  
Lumbrella 33 Yellow

Union Point, Georgia  
54 X 3 Gal.

1,223.10

Georgia Pacific Corp.  
Green End Spray 400  
Lumbrella 33 Yellow

Monticello, Georgia  
4 X 55 Gal.  
271 X 3 Gal.

1,300.59  
5,069.79

6,370.38

Dickert Lumber Company  
Liquid Noxtane SS1

Newberry, South Carolina  
3 X 55 Gal.

1,006.50

Little Suwanee Lumber Co.  
Liquid Noxtane SS1

Homerville, Georgia  
5 X 55 Gal.

1,595.00

Newberry Lumber Company  
Lumbrella 15 Yellow

Newberry, South Carolina  
1 X 53 Gal.

217.30

### 4. Newark, California Warehouse

Capitol Ind, Supply  
Liquid Noxtane SS1  
Liquid Azide

Salem, Oregon  
30 X 55 Gal.  
10 X 55 Gal.

7,713.75  
2,992.00

10,705.75

Alpha Ind. Supply  
Liquid Noxtane SS1  
Liquid Azide

Nevada City, California  
38 X 55 Gal.  
6 X 55 Gal.

9,770.75  
1,795.20

11,669.95

TOLS004896

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 4

### Newark, California Warehouse Continued

P. B. M. Supply	Chico, California	
Liquid Noxtane SS1	40 X 55 Gal.	10,285.00
Liquid Azide	8 X 55 Gal.	<u>2,393.60</u>
		12,678.60

Ketchikan Pulp Company	Ketchikan, Alaska	
Liquid Noxtane SS1	3 X 55 Gal.	1,006.50

Reliable Hardware Co.	Arcata, California	
Red End Sealer	1 X 55 Gal.	108.90
Orange End Sealer	10 X 55 Gal.	864.88
Clear End Sealer	2 X 300 Gal.	841.50
Liquid Noxtane SS1	13 X 55 Gal.	<u>5,913.88</u>
		7,729.16

E. B. Yancey Lumber Co.	Madera, California	
Liquid Noxtane SS1	3 X 55 Gal.	1,006.50

Snider Lumber Company	Turlock, California	
Liquid Noxtane SS1	14 X 55 Gal.	4,466.00
Liquid Azide	6 X 55 Gal.	<u>2,277.00</u>
		6,743.00

Cascade Ind. Supply	Klamath Falls, Oregon	
Liquid Noxtane SS1	3 X 345 Gal.	4,838.63
Liquid Azide	1 X 300 Gal.	1,350.00
Liquid Noxtane SS1	15 X 55 Gal.	3,856.88
Liquid Azide	6 X 55 Gal.	1,795.20
Clear End Sealer	2 X 55 Gal.	154.28
Red End Sealer		<u>88.83</u>
		12,083.82

TOLS004897

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 5

5. Tuscaloosa, Alabama Blender

Woodtox 140 R T U Bulk

Norman Treating Co.	Goshen, Alabama	4448 Gal.	3,647.36
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Holman Wood Prod.	Northport, Alabama	531 Gal.	424.80
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6. Cotton Valley, Louisiana - Blender

Woodtox 140 R T U - Bulk

Commercial Box & Lbr.	Texarkana, TX	12040 Gals.	10,234.00
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Bennett Box Company	Texarkana, TX	5956 Gals.	5,062.60
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Texas Container	Texarkana, TX	5952 Gals.	5,059.20
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Lear Siegler	Arcadia, LA	8389 Gals.	7,130.66
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7. Portland, Oregon Blender

Jeld Wen Corporation			
Woodtox 140 R T U		7051 Gals.	7,403.55

Permapost Prod.	Hillsboro, Oregon		
WR 340		5 X 408 #	387.60

Honolulu Wood Treating	Honolulu, Hawaii		
WR 340		60 X 408 #	4,161.60

8. St. Louis, Missouri

Penta (Calendar Month)	July		
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TOLS004898

F.P.D. Plants	438,325 LBS		
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Customers	414,855		
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W.T.C.	104,500		
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Total = 957,680

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 6

### W T C Products - Major Shipments

Hurd Millwork Company Woodtox PrePrime R TU	Medford, Wisconsin 6025 Gals.	4,940.50
Weather Shield MFG Woodtox PrePrime R TU	Medford, Wisconsin 3945 Gals.	3,234.90
Weather Shield Mfg. Woodtox PrePrime R TU	Ladysmith, Wisconsin 3965 Gals.	3,251.30
Neway Crating Woodtox PrePrime R TU	Norman, Oklahoma 4000 Gals.	3,280.00
Malta MFG. Company Woodtox PrePrime R TU	Malta, Ohio 5747 Gals.	4,712.54
Northern Sash & Door Woodtox PrePrime R TU	Hawkins, Wisconsin 4010 Gal.	3,288.20
Crestline Woodtox PrePrime R TU	Wausau, Wisconsin 5872 Gal.	4,815.04
Wm. Barr & Company Woodtox PrePrime Conc.	Memphis, Tennessee 3966 Gal.	8,328.60
Milan Box Company Woodtox 140 RTU	Milan, Tennessee 5831 Gal.	4,956.35
Bennett Box Company Woodtox 140 R. T. U.	Centreville, Iowa 4841 Gal.	4,114.85
R. J. Bond, Inc. Timbertox D-5	Carmi, Illinois 5655 Gal.	3,506.10

TOLS004899

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date August 1, 1975

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### WTC Products - Major Shipments Continued

Norton MFG Company  
Timbertox D-5

Gulf States Paper  
Lumbrella 33 Yellow  
Green End Spray 400

Webb & Son Inc.  
WR 340 Conc.

Amsco Div. Union Oil  
Penta Wood Pres. RTU  
Penta Wood Pres. Conc.  
Woodtox RTU  
Woodtox R.T.U.

Weyerhaeuser Company  
Liquid Noxtane SSI

New England Log Homes  
Woodtox 140 Conc.

Federal Chem. Company  
Penta Stain Conc.

Farmers Union  
Penta Wood Pres. Conc.  
Penta Wood Pres. Conc.

Memphis, Tennessee  
5633 Gal

Vance, Alabama	3,492.46
135 X 3 Gal.	2,895.75
2 X 55 Gal.	632.50
	<u>3,528.25</u>

Sherburne, N.Y.	3,745.44
54 X 408 #	

Minneapolis, Minn	1,590.00
120 X 5 Gal.	873.00
30 X 6 X 1 Gal.	225.00
20 X 5 Gal.	
50 X 6 X 1 Gal.	855.00
	<u>3,543.00</u>

Dierks, Arkansas	2,013.00
6 X 55 Gal.	

Great Barrington, Mass	2,233.00
14 X 55 Gal.	

Indianapolis, Indiana	4,235.00
20 X 55 Gal.	

St. Paul, Minn	850.00
50 X 5 Gal.	972.00
40 X 6 X 1 Gal.	
	<u>1,822.00</u>

TOLS004900

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 7

### Balance of Shipments

Woodtox PrePrime Conc.	6 X 5 Gal.	109.50
Woodtox PrePrime RTU	3 X 55 Gal.	305.25
Woodtox 140 Conc.	6 X 5 Gal.	102.00
Woodtox 140 RTU	6 X 55 Gal.	379.50
Woodtox RTU	4 X 55 Gal.	466.25
Woodtox RTU	58 X 5 Gal.	689.50
Woodtox RTU	8 X 6 X 1 Gal.	144.00
Woodtox 152 RTU	7 X 55 Gal.	770.00
Woodset 310 Conc.	2 X 55 Gal.	462.00
Penta Wood Pres. Conc.	11 X 55 Gal.	2,332.00
Penta Wood Pres. Conc.	10 X 5 Gal.	225.00
Penta Wood Pres. RTU	1 X 55 Gal.	82.50
B Wood Pres.	46 X 6 X 1 Gal.	662.40
Clear End Sealer	3 X 55 Gal.	445.50
Clear End Sealer	7 X 5 Gal.	110.25
Red End Sealer	1 X 55 Gal.	162.25
KLB Beam Sealer	9 X 55 Gal.	899.25
Wood Seal Wax	1 X 426 #	166.14
WR 340 Conc.	10 X 408 #	734.40
Liquid Noxtane 1	2 X 55 Gal.	484.00
Liquid Noxtane SS1	1 X 55 Gal.	335.50
Timbertreat 625	1 X 30 Gal.	156.00
Timbertreat 625	1 X 5 Gal.	26.75
Poletreat 15	2 X 45 #	34.56
WTC #7-11	10 X 39 #	312.00
WTC #71	4 X 515 #	1,874.60
WTC #74	4 X 460 #	1,380.00
Super Noxtane	90 X 50 #	1,994.50
Woodtreat AA	10 X 40 #	228.00
Penta Stain 501	1 X 5 Gal.	21.75
Penta Stain 502	4 X 5 Gal.	87.00
Penta Stain 502	10 X 4 X 1 Gal.	165.60
Penta Stain 504	1 X 35 Gal.	206.25
Penta Stain 505	14 X 5 Gal.	264.90

TOLS004901

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 8

### Balance of Shipments Continued

Penta Stain 506	5 X 5 Gal.	108.75
Penta Stain 507	2 X 5 Gal.	43.50
Penta Stain 507	5 X 4 X 1 Gal.	92.00
Penta Stain 509	1 X 55 Gal.	206.25

### Penta Invoiced for July Accounting Month:

Koppers Plants	\$ 106,233
Customers	<u>111,606</u>
Total	\$ 217,839
July 1974	286,825
W T C Products	236,138
July 1974	304,732

### II. Raw Materials

Hercules reworked the yellow pigment reported as a problem last month; we never ran out of product nor were any customers inconvinced because of the problem, but it sure created problems in St. Louis. Two other suppliers are working on alternate raw materials now.

All materials remain in good supply but little cost erosion is happening; increases on petroleum related materials are anticipated in the near future.

### III. Inventory

Salcs Dept. was given a list of products (primarily resale items) which cost \$15,498.13 that need to be moved; urgent co-operation is requested.

TOLS004902

BZTO104(e)041723

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 9

### IV. Profit Opportunities

We have received reports of Arsenal closings and curtailments and are expecting further reduction in Woodtox 140 sales. As well, we have received cancellation of our blending and distribution arrangement with Hunt Oil at Tuscaloosa and it appears, must remove the remaining 30,000 gallons soon.

While penta bookings for August are now better than the July total was, it is far from a good month. We have concentrate formulated by Monsanto from our oil and their effluent stream penta ready for field testing and await shipping instructions; Monsanto now expects some 13% of their total production to come from this effluent stream pickup. We are pushing for 25¢ Lb. penta in this so we can become competitive in the South with concentrate.

Woodtox PrePrime sales will level off in August; whereas eight T/L-C/L orders shipped in July, only about 5 are anticipated in this month.

Rumbles from the west coast men about losing more Liquid Noxtane accounts to Chapman's PQ-10 because of price - including Weyerhaeuser at Coos Bay and Olson-Lawyer Lumber at White City, Oregon. Wes Alt reports Olson-Lawyer had men working near the PQ-10 operation who experienced dermatitis, nausea and dizziness and the OSHA men upon investigation were told the product was being reformulated.

Lumbrella sales are down again in prospects for August.

### VI/ Assistance Requirements

1. Need for elimination of high priced components in Liquid Noxtane & Lumbrellas.
2. Increased sales calls on customer penta accounts.
3. Help in finding penta co-solvent (With more solvency and less cost)
4. Overhead burden redistribution study.
5. Inventory computerization
6. Monthly product sales forecasting by sales territory, requested by 15th of month.

TOLS004903

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 1, 1975

Page 10

### VI. General Comments

#### Sales Forecast for August Accounting

Penta	Koppers	\$ 192,000
	Customers	166,000
W T C		210,000

W T C union employees selected Sept. 2 as their 11th Holiday; Plant will be closed both Sept. 1 & 2.

### VII. Travel

July 7 - 8 - 9                    Wisconsin calling on prospective blenders  
July 10 - 11 & 28                Vacation

### Tentative

August 12 - 13                Minn - Wisc.  
August 19 - 20 - 21            Virginia

R. F. Simmons

RFS/sjk

TOLS004904

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
D. F. Taylerson

To R. B. Putman  
Location Pittsburgh, PA K/1001  
Subject Monthly Report August, 1975  
Wood Treating Chemicals

From R. F. Simmons  
Location St. Louis, Missouri  
Date August 28, 1975

### I. Shipment Highlights - August Accounting Month

#### 1. Camden, New Jersey Warehouse

Van Horn & Metz Company Penta Wood Pres. Conc.	Conshohocken, PA 10 X 55 Gal.	1980.00
Savogran Company, Inc. Woodtox S	Norwood, Mass 10 X 55 Gal.	1410.75
Ward Cabin Company Woodtox PrePrime Conc.	Houlton, Maine 4 X 55 Gal.	726.00
Gibson Homans Company Penta Wood Pres. Conc.	Matawan, N.J. 3 X 55 Gal.	660.00

#### Balance of Shipments

Penta Wood Pres. Conc.	4 X 55 Gal.	880.00
Woodtox R T U	5 X 55 Gal.	577.50
Woodtox R T U	26 X 6 X 1 Gal.	468.00
Woodtox PrePrime R T U	2 X 55 Gal.	203.50
Super Noxtane	5 X 50 Lbs.	130.00

#### 2. Enfield, North Carolina Warehouse

Koppers Company, Inc. Liquid Noxtane S S 1 Timbertreat 625	Richmond, Virginia 3 X 55 Gal. 1 X 55 Gal.	1006.50 280.50 1287.00
--	--	------------------------------

Flack-Jones Lumber Co. Lumbrella 12 Red Brown	Summerville, S.C. 15 X 53 Gal.	2822.25
Union Camp Corp. Lumbrella 33 Redwood	Franklin, VA 108 X 3 Gal.	2446.20

TOLS004905

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date August 28, 1975

Page 2

### Enfield, North Carolina Warehouse Continued

J. W. Jones Lumber Company Liquid Noxtane S S 1 Timbertreat 625 Lumbrella 15 Redwood	Elizabeth City, N.C. 6 X 55 Gal. 2 X 55 Gal. 4 X 53 Gal.	2013.00 561.00 869.20 <u>3443.20</u>
Corbett Lumber Company Lumbrella 15 Yellow	Wilmington, N.C. 9 X 53 Gal.	1955.70
L. R. Foreman & Son Lumbrella 15 Yellow	Elizabeth City, N.C. 16 X 53 Gal.	3222.40
Link Taylor Corp. Liquid Nortane S S 1	Lexington, N.C. 10 X 55 Gal.	3190.00
Beasley Lumber Santobrite Lumbrella 15 Redwood	Battleboro, N.C. 10 X 100 Lbs. 4 X 53 Gal.	620.00 869.20 <u>1489.20</u>
Beasley Lumber Santobrite Lumbrella 15 Redwood	Scotland Neck, N.C. 15 X 100 Lbs. 5 X 53 Gal.	930.00 1086.50 <u>2016.50</u>
Sheffield Lumber Lumbrella 15 Redwood	Suffolk, V A 4 X 53 Gal.	869.20
Mc Intosh Lumber Lumbrella 15 Redwood	Star, N C 3 X 53 Gal.	707.55
<u>Balance of Shipments</u>		
Super Noxtane Santobrite	60 X 50 # 5 X 100 #	1440.50 319.45

TOLS004906

BZTO104(e)041727

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

Page 3

From R. F. Simmons

Location \_\_\_\_\_

Date August 28, 1975

### 3. Conley, Georgia Warehouse

Koppers Company, Inc.  
Liquid Noxtane S S 1

W. E. Sherrod Lumber  
Liquid Noxtane S S 1  
Lumbrella 33 Yellow  
Red End Spray

Georgia Pacific  
Green End Spray

Georgia Pacific  
Lumbrella 33 Yellow  
Lumbrella 33 Yellow

Flack Jones Lumber  
Liquid Noxtane S S 1

Georgia Pacific Corp.  
Lumbrella 33

Bemis Hardwood  
Liquid Noxtane S S 1  
Timbertreat 625

Riceboro, GA  
3 X 55 Gal. 1006.50

Greenville, FA	
2 X 55 Gal.	632.50
27 X 3 Gal.	490.05
4 X 5 Gal.	115.00
	<u>1237.55</u>

Varnville, S.C.	
6 X 55 Gal.	1757.00

Monticello, GA	
135 X 3 Gal.	2540.61
3 X 55 Gal.	861.76
	<u>3402.37</u>

Summerville, S.C.	
10 X 55 Gal.	3190.00

Cross City, FA	
135 X 3 Gal.	2600.59

Robbinsville, N.C.	
1 X 55 Gal.	355.50
2 X 55 Gal.	561.00
	<u>896.50</u>

### Balance of Shipments

Lumbrella 15 Yellow  
Woodtox PrePrime Cone.  
Super Noxtane

3 X 55 Gal.	651.90
4 X 55 Gal.	726.00
6 X 50 Lbs.	150.00

TOLS004907

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date August 28, 1975

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### 4. Newark, California Warehouse

Yancey Lumber  
 Liquid Noxtane S S 1

Madera, California  
 4 X 55 Gal. 1342.00

P B M Supply  
 Liquid Noxtane S S 1  
 Liquid Azide

Chico, California  
 50 X 55 Gal. 12996.50  
 14 X 55 Gal. 4188.80  
 \_\_\_\_\_ 17185.30

Cascade Ind. Supply  
 Liquid Noxtane S S 1  
 Liquid Noxtane S S 1  
 Clear End Sealer

Redding, California  
 4 X 345 Gal. 6451.50  
 12 X 55 Gal. 3085.50  
 4 X 55 Gal. 308.55  
 \_\_\_\_\_ 9845.55

### 5. Tuscaloosa, Alabama Blender

Woodtox 140 R T U Bulk

Holman Wood Products	Northport, Alabama
1018 Gals	814.40

### 6. Cotton Valley, Louisiana Blender

Woodtox 140 R T U Bulk

F & M Corp.	Caney, Kansas	6008 Gal.	5106.80
Bennett Box Co.	Texarkana, Texas	5915 Gal.	5027.75
Texas Container	Texarkana, Texas	6004 Gal.	5103.40
Ward Davis, Inc.	Texarkana, Texas	6050 Gal.	5142.50

TOLS004908

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date August 28, 1975

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### 7. Portland, Oregon Blender

Gilsonite, Inc.  
 Redy Coat Penta Conc.  
 Redy Coat Penta R T U

Portland, Oregon  
 60 X 55 Gal.  
 20 X 55 Gal.

7590.00  
 803.00  
 83930.00

Jeld Wen Corp.  
 Woodtox 140 R T U

Flagstaff, Arizona  
 6848 Gal.

7190.40

### Balance of Shipments

W R 340 Conc.  
 Woodtox 140 R T U  
 Timbertox 40 Conc.  
 Anstrik Green

9 X 408 #  
 13 X 55 Gal.  
 2 X 55 Gal.  
 2 X 55 Gal.

660.96  
 992.75  
 412.50  
 363.00

### 8. St. Louis, Missouri

Penta (Calendar Month)	August
F P D Plants	573,430 Lbs.
Customers	240,425
W T C	<u>67,813</u>
	881,668 Lbs.
	Total

### W T C Products - Major Shipments

National Solvents  
 Woodtox PrePrime R T U

Medina, Ohio  
 10700 Gal.

8774.00

Lincoln Wood Products  
 Woodtox PrePrime R T U

Merrill, Wisconsin  
 5811 Gal

4765.02

Weather Shield Mfg.  
 Woodtox PrePrime R T U

Medford, Wisconsin  
 4005 Gal.

3284.10

Northern Sash  
 Woodtox PrePrime R T U

Hawkins, Wisconsin  
 4004 Gal.

3283.

TOLS004909

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 28, 1975

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### W T C Products - Major Shipments Continued

Vetter Mfg.	Stevens Point, Wisconsin	
Woodtox PrePrime R T U	2525 Gals	2069.68
Malta Mfg.	Malta, Ohio	
Woodtox PrePrime R T U	5875 Gal.	4817.50
Crestline	Wausau	
Woodtox PrePrime R T U	6046 Gal.	4957.72
Hurd Millwork	Medford, Wisconsin	
Woodtox PrePrime R T U	3963 Gal.	3249.66
Milan Box Company	Milan, Tennessee	
Woodtox 140 R T U	5879 Gal.	4997.15
Indiana Creosoting	Bloomington, Ind.	
Timbertox D-5	5764 Gal.	3573.68
Federal Chemical	Indianapolis, Indiana	
Woodtox PrePrime Conc.	20 X 55 Gal.	3190.00
Webb & Son	Sherburne, N.Y	
W R 340 Conc.	54 X 408 #	3745.44
Hatheway Patterson	Mansfield, Mass	
W R 340 Conc.	30 X 408 #	2080.80
Asplundh Tree	Willow Grove, PA	
Pole Life T F	56 X 50 #	1135.20
Pole Life T F	19 X 280 #	2042.88
Koppers Company, Inc.		3078.08
K L B Beam Sealer	Magnolia, Arkansas	
Bauer Corp.	12 X 55 Gal.	1188.00
Penta Stain # 509	Wooster, Ohio	
	5 X 55 Gal.	1031.25

TOLS004910

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Page 7

Date August 28, 1975

### Balance of Shipments

Woodtox 140 Conc.	1 X 55 Gal.	96.25
Woodtox 140 Conc.	4 X 55 Gal.	682.00
Woodtox PrePrime Conc.	1 X 5 Gal.	18.25
Woodtox 152 R T U	1 X 55 Gal.	110.00
Woodtox R T U	2 X 55 Gal.	203.50
Woodtox R T U	52 X 5 Gal.	613.00
Woodtox Pre Prime R T U	14 X 55 Gal.	1314.50
Woodset 310 Conc.	1 X 5 Gal.	22.50
Spec Penta Wood Pres. Conc.	6 Drums	563.16
Penta Wood Pres. Conc.	7 X 55 Gal.	1540.00
Penta Wood Pres. Conc.	4 X 5 Gal.	94.00
Penta Wood Pres. R T U	1 X 55 Gal.	77.00
Penta Wood Pres. R T U Dark	2 X 55 Gal.	181.50
Timbertreat 625	7 X 55 Gal.	1851.30
Liquid Noxtane S S 1	4 X 55 Gal.	1339.40
Clear End Sealer	4 X 55 Gal.	594.00
Clear End Sealer	22 X 5 Gal.	346.50
Yellow End Sealer	1 X 55 Gal.	162.25
Green End Spray	1 X 55 Gal.	300.10
Anstrick Blue Conc.	2 X 5 Gal.	250.00
B Wood	29 X 6 X 1 Gal.	417.60
Super Noxtane	22 X 50 #	720.00
Santobrite Pellets	5 X 100 #	305.00
Poletreat 15	1 X 475 #	199.50
Woodtreat AA	5 X 40 #	114.00
Woodtreat AA	18 Tubes	77.40
W T C 7 - 11	1 X 455 #	332.15
W T C # 71	2 X 515 #	937.30
Penta Stain # 502	6 X 5 Gal.	136.50
Penta Stain # 504	2 X 4 X 1 Gal.	36.80
Penta Stain # 506	8 X 5 Gal.	91.00
Penta Stain # 506	7 X 4 X 1 Gal.	128.80
Penta Stain # 508	3 X 4 X 1 Gal.	55.20
Penta Stain # 509	1 X 55 Gal.	206.25

TOLS004911

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

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Date August 28, 1975

### Invoicing for August Accounting Month

	1975	1974
Penta - Koppers Plant	231,950	236,732
Customer	169,226	337,346
Total	<u>401,176</u>	<u>574,078</u>
W T C Products	191,557	286,640
Grand Total	592,733	860,718

### II. Raw Materials

Hercules has fallen down on supplying X-3492 pigment as ordered and again we will be tight on Lumbrella 33 Yellow. Numerous competitor samples have been tried, but to date we have no alternate for the Hercules pigment.

Increases have begun on petroleum derivatives - mineral spirits, aromatic solvents, isopropyl alcohol.

### III. Inventory

There has been no movement of the \$ 15,500 of excess inventory provided Sales last month. To this, we must now add another \$40,000 (for 45,000 gallons at Tuscaloosa and 30,000 gallons at St. Louis) for obsolete Woodtox 140. Hunt Oil at Tuscaloosa is vigorously requesting removal of the inventory there.

### IV. Profit Opportunities

Woodtox Ammo Box dip sales continues to look very bleak. All locations only sold 12,000 gallons in August. Woodtox millwork treatment continues to hold well in sales. One prospect we are working with offers an additional 200,000 gallons per year; several small accounts remain as prospects when and if we can offer local Wisconsin blending.

TOLS004912

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date August 28, 1975

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### V. Assistance Requirements

1. Need for lower cost components - Liquid Nortane and Lumbrellas.

Cost savings of 35¢/gal on Liquid Nortane was effected this month with Reichhold Tetra-Penta, but 14¢ of this will be lost with the next Lithium purchases.

Savings of an average of 10¢/Lb on D E A (for Lumbrellas) have been made.

2. Customer penta sales fell off even further in August.
3. Continued search for inexpensive co-solvents.
4. Overhead burden redistribution study.
5. Bob Hamilton's visit in August notes we are two years off from inventory computerization.
6. We still are not receiving sales forecasting as well as could be expected

### VI. General Comments

#### Sales Forecast for September

Penta	Koppers	107,000
	Customers	200,000
W T C	Products	114,000
		200,000
	\$	501,000
		421,000

### VII. Travel

August - None

TOLS004913

September Tentative

2 Days Wisconsin

2 Days Cotton Valley-Tuscaloosa

3 Days Virginia

cc: F. E. Boge  
J. D. Hite  
R. D. Arsenault  
J. M. Montgomery  
D. F. Taylerson

# KOPPER'S

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report September 1975  
Wood Treating Chemicals

Date October 7, 1975

### I. Shipment Highlights - September Accounting Month

#### 1. Camden, New Jersey Warehouse

Van Horn & Metz Company Penta Wood Pres. Conc.	Conshocken, PA 11 X 55 Gal.	2,079.00
PA State Corr., Inst. Woodtox 140 Conc.	Bellefonte, PA 8 X 55 Gal.	1,210.00

#### Balance of Shipments

Woodtox Pre Prime Conc.	2 X 55 Gal.	363.00
Penta Wood Pres. Conc.	1 X 55 Gal.	220.00
Woodtox 140 R TU	5 X 55 Gal.	481.25
Woodtox R TU	9 X 5 Gal.	114.75
Woodtox R TU	1 X 6 X 1 Gal.	18.00
Super Noxtane	13 X 50 Lbs.	279.80

#### 2. Enfield, North Carolina Warehouse

Bemis Hardwood Liquid Noxtane SS 1	Robbinsville, NC 3 X 55 Gal.	1,006.50
Dickert Lumber Co. Liquid Noxtane SS 1	Newberry, SC 3 X 55 Gal.	1,006.50
Gulf States Paper Corp. Lumbrella 33 Yellow	Vance, AL 135 X 3 Gal.	2,895.75
Westvaco Corp. Lumbrella 12 Red Brown	Summerville, SC 15 X 53 Gal.	2,822.25
Union Camp Corp. Lumbrella 33 Redwood	Franklin, VA 162 X 3 Gal.	3,023.94

TOLS004914

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### Enfield, North Carolina Warehouse Continued

Coastal Lumber Co.	Weldon, NC	
Liquid Noxtane SS 1	2 X 55 Gal.	671.00
Timbertreat 625	1 X 55 Gal.	<u>280.00</u>
		951.00
Coastal Lumber Co.	Pantego, NC	
Santobrite Pellets	10 X 100 #	620.00
Georgia Pacific Corp.	Murfesboro, NC	
Timbertreat 625	1 X 55 Gal.	257.17
Liquid Noxtane SS 1	2 X 55 Gal.	<u>626.31</u>
		883.48
Georgia Pacific Corp.	Enfield, NC	
Santobrite	10 X 100 #	638.40

### Balance of Shipments

Liquid Noxtane SS 1	10 X 55 Gal.	3,355.00
Timbertreat 625	2 X 55 Gal.	561.00
Lumbrella 33 Redwood	54 X 3 Gal.	1,336.50
Lumbrella 15 Redwood	2 X 53 Gal.	453.15
Lumbrella 12 Red Brown	4 X 53 Gal.	795.00
Lumbrella 15 Yellow	4 X 53 Gal.	869.20
Super Noxtane	44 X 50 #	1,049.00
Santobrite	5 X 100 #	310.00

### 3. Conley, Georgia Warehouse

Tolleson Lumber Co.	Perry, GA	
Liquid Noxtane SS 1	4 X 55 Gal.	1,342.00
Georgia Pacific Corp.	Warrenton, GA	
Lumbrella 33 Yellow	135 X 3 Gal.	2,571.99

TOLS004915

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 3

### Conley, Georgia Warehouse Continued

Georgia Pacific Corp. Lumbrella 33 Yellow	Russellville, SC 53 X 3 Gal.	1,031.74
Holly Hill Lumber Co. Lumbrella 33 Yellow	Walterboro, SC 54 X 3 Gal.	980.10
Chas. Ingram Lumber Co. Lumbrella 33 Yellow	Florence, SC 27 X 3 Gal.	668.25
Westvaco Corp. Liquid Noxtane SS 1	Summerville, SC 5 X 55 Gal.	1,677.50
Hubert Moore Lumber Liquid Noxtane	Aladaha, GA 15 X 55 Gal.	4,752.00
Paul Fowler Penta Wood Pres. Conc.	Alma, GA 1 X 55 Gal.	220.00

### 4. Newark, California Warehouse

Snyder Lumber Prod. Liquid Noxtane SS 1	Turlock, CA 10 X 55 Gal.	3,190.00
Capitol Ind. Supply Liquid Noxtane SS 1 Red End Sealer	Salem, OR 59 X 55 Gal. 2 X 55 Gal.	15,170.38 177.65 <u>15,348.03</u>
Reliable Hdw Co. Clear End Sealer Liquid Noxtane SS 1 Liquid Noxtane SS 1 Clear End Sealer Liquid Azide 200	Arcata, CA 3 X 300 Gal. 1 X 345 Gal. 13 X 55 Gal. 6 X 55 Gal. 2 X 55 Gal.	1,262.25 1,612.88 3,342.63 462.83 <u>598.40</u>

7,278.99

TOLS004916

# KOPPERS

## Interoffice Correspondence

To R. B. Putman From R. F. Simmons  
Location \_\_\_\_\_ Location \_\_\_\_\_  
Subject \_\_\_\_\_ Date October 7, 1975

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### Newark, California Warehouse Continued

Webb Furniture	Galax, VA	
Liquid Azide 200	2 X 55 Gal.	759.00

Great Western Chemical	Seattle, WA	
Red End Sealer	5 X 55 Gal.	544.50

### 5. Tuscaloosa, Alabama Blender

Woodtox 140 R T U - Bulk

Holman Wood Prod.	Northport, AL	495 Gal.	396.00
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### 6. Cotton Valley, Louisiana Blender

Woodtox 140 R T U - Bulk

Texas Container	Texarkana, Texas	12033 Gal.	10,228.05
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Bennett Box Co.	Texarkana, Texas	4804 Gal.	4,083.40
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### 7. Portland, Oregon Blender

Jeld Wen Corp.	Flagstaff, Arizona	
Woodtox 140 R T U	6996 Gal.	7,345.80

Brewer Chemical	Honolulu, HA	
Woodtox 140 Conc.	40 X 55 Gal.	5,346.00

Jasco Chemical	Mt. View, CA	
Woodtox 140 Conc.	3072 Gal.	5,068.80

J. H. Baxter and Co.	Eugene, OR	
Petroset II	7 X 460 #	2,479.40

TOLS004917

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 5

### Portland, Oregon Blender Continued

Gilsonite Co.	Portland, OR	1,164.35
Redy Coat Penta R T U	29 X 55 Gal.	
Morris Lumber Co.	Grants Pass, OR	
Timbertox 40 Conc.	4 X 55 Gal.	825.00

### 8. St. Louis, Missouri

#### W T C Products - Major Shipments

Koppers	Oroville, California	
W T C # 71	6 X 515 #	2,288.30
Blue Anstrik 1-50	2 X 5 Gal.	300.00
		2,988.30

Koppers	Monticello, Mississippi	
Liquid Noxtane SS 1	3 X 55 Gal	1,006.50
Timbertreat 625	3 X 55 Gal	841.50
		1,848.00

Koppers	Magnolia, Arkansas	
K L B Beam Sealer	10 X 55 Gal.	1,045.00

Elco Mfg. Company	Sharpsburg, PA	
Woodtox PrePrime Conc.	3845 Gal.	9,035.75

Wm. Barr and Company	Memphis, Tennessee	
Woodtox PrePrime Conc.	4002 Gal.	8,404.20

Burton Enterprises Inc.	Cobleskill, N.Y.	
Woodtox PrePrime R T U	4042 Gal.	3,314.44

TOLS004918

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### St. Louis, Missouri Continued

Weathershield Mfg. Woodtox PrePrime R TU	Medford, Wisconsin 4002 Gal.	3,281.64
Malta Mfg. Company Woodtox PrePrime R TU	Malta, Ohio 5926 Gal.	4,859.32
Crestline Woodtox Pre Prime R TU	Wausau, Wisconsin 5745 Gal.	4,710.90
Hurd Millwork Company Woodtox Pre Prime R TU	Medford, Wisconsin 4010 Gal.	3,288.20
Northern Sash Woodtox Pre Prime R TU	Hawkins, Wisconsin 4007 Gal.	3,285.74
Bennett Box Woodtox 140 R TU	Clinton, IA 4549 Gal.	3,866.65
J. R. Ginn Woodtox 140 R TU	St. Louis, Missouri 3982 Gal.	3,384.70
Federal Chemical Co. Penta Stain Base Conc.	Indianapolis, Ind. 20 X 55 Gal.	4,235.00
Universal Corp. Penta Wood Pres. Conc.	Columbus, Ohio 3926 Gal	9,618.70
Southwest Forest Ind. WK - 60 Solvent	Prescott, Arizona 71830 #	7,542.15
Louisiana Pacific Corp. Lumbrella 12 Green	Winnfield, LA 55 X 53 Gal.	9,619.50

TOLS004919

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 7

### St. Louis, Missouri Continued

Red Hill Chip Corp Lumbrella 25 Cherry Tone	Conway, S.C. 8 X 55 Gal.	2,332.00
Columbia Forest Ind. Lumbrella 25 Cherry Tone	Riegel Wood, N. C. 7 X 55 Gal.	2,184.84
E T C Chemical Co. Lumbrella 33 Yellow Liquid Noxtane SS 1	Hattiesburg, Mississippi 324 X 3 Gal. 6 X 55 Gal.	5,904.90 <u>1,811.70</u> 7,716.60
Buchanan Lumber Co. Liquid Noxtane 1 Timbertreat 625	Montgomery, AL 4 X 55 Gal. 2 X 55 Gal.	1,100.00 <u>561.00</u> 1,661.00
G. S. Robins Santobrite # 2 Fines	St. Louis, Missouri 60 X 100 #	2,700.00
Fort Ligonier Mem Found. Woodtox Pre Prime R TU Woodtreat AA	Ligonier, PA 2 X 55 Gal. 75 X 40 #	203.50 <u>1,710.00</u> 1,913.50
Myron Johnson Penta Stain # 502 Penta Stain # 506 Penta Wood Pres. Conc.	Cincinnati, Ohio 36 2/3 X 6 X 1 Gal. 10 X 6 X 1 Gal. 4 X 5 Gal.	1,012.00 276.00 <u>94.00</u> 1,382.00

TOLS004920

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### St. Louis, Missouri Continued

#### Balance of Shipments

Woodtox Pre Prime R T U	11 X 55 Gal.	915.75
Woodtox 140 R T U	16 X 55 Gal.	1,388.75
Woodtox 140 Conc.	6 X 5 Gal.	102.00
Woodtox R T U	1 X 55 Gal.	101.75
Woodtox R T U	10 X 5 Gal.	127.50
Woodtox R T U	15 X 6 X 1 Gal.	270.00
Penta Wood Pres. Conc.	4 X 55 Gal.	792.00
Penta Wood Pres. Conc.	34 X 5 Gal.	604.00
Penta Wood Pres. Conc.	10 X 6 X 1 Gal.	243.00
Penta Wood Pres. R T U	250 Gal.	160.00
Penta Wood Pres. R T U	3 X 55 Gal.	266.20
Penta Wood Pres. R T U	12 X 5 Gal.	150.00
B Wood Pres.	12 X 5 Gal.	99.00
B Wood Pres.	43 X 6 X 1 Gal.	619.20
Lumbrella 15 Redwood	2 X 53 Gal.	471.70
Liquid Noxtane SS1	1 X 55 Gal.	335.50
Poletreat 15	10 X 45 #	207.00
C Pole Wrapper	7 Rolls	26.95
WTC # 71	1 X 515 #	468.65
WTC # 72	1 X 40 #	20.40
Super Noxtane	61 X 50 #	1,406.50
Penta Stain # 502	2 X 55 Gal.	440.00
Penta Stain # 502	10 X 5 Gal.	230.00
Penta Stain # 506	20 X 5 Gal.	435.00
Penta Stain # 507	3 X 5 Gal.	68.25
Penta Stain # 509	1 X 55 Gal.	206.25

TOLS004921

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 9

### St. Louis, Missouri Continued

#### Invoicing for September Accounting Month

		<u>1975</u>	<u>1974</u>
Penta	Koppers Plants	\$ 120,504	\$ 179,952
	Customers	\$ 53,816	\$ 238,883
W T C Products		\$ 219,017	\$ 269,398
Grand Total		\$ 393,337	\$ 688,233

### II. Raw Materials

We are out of Hercules X-3492 Yellow pigment for Lumbrella 33 Yellow, and while Hercules is supposed to be working on the problem, we may have our own problem in not having product for sale within about two weeks. No alternates have been found for the Hercules material; testing on candidate replacements continue as samples are received.

As a result of recent steel price increases, the container industry is in process of again raising pail and drum prices. We anticipate 60 ¢ per drum increases by November 15.

Two co-solvents have increased effective October 1; K B - 3 from .04 to .05 per pound FOB Kingsport, Tennessee and Heavy Oxo Bottoms from .08 to .10 per pound FOB Texas City, Texas.

We expect other solvents to increase, to some extent dependent on market conditions and refinery inventories, but more dependent on government regulations and price increases on crude oil. Acetone, isopropanol and some aromatic oils have all increased in the past few weeks and fuel oils and mineral spirits are sure to follow in four to eight weeks.

On the market, dry pigment have also begun to increase in the last few days, so the dispersions we purchase will also increase shortly.

TOLS004922

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

Page 10

### III. Inventory

18,000 gallons of the old Woodtox 140 R T U has been sold at Tuscaloosa; 14,900 gallons remain to be moved from this location. Two truckloads of the old product have moved from St. Louis, but totally considering the concentrate and R T U on hand, there still is 40,000 gallons in St. Louis to be sold.

\$2800 of slow moving inventory (Santobrite powder) was sold during the month; we again ask Sales attention be directed to the \$12,700 of material on the list provided July 1.

Inventory evaluation as of September 20 shows a \$30,000 inventory reduction since June in spite of several substantial raw material increases.

### IV. Profit Opportunities

We probably have booked most all the penta orders we can expect in the October accounting month; this amounts to:

	<u>LBS</u>	<u>\$</u>
Koppers	399,300	151,734
Customers	266,105	101,120
Total	665,405	252,854

Orders Are:

	<u>Koppers Plants</u>		<u>Customers</u>
80,000 Lbs.	Montgomery (Bulk)	25,200	Elrod (Bags)
79,800 Lbs.	Montgomery (Bags)	39,305	Escambia (Blocks)
39,900 Lbs.	Houston (Bags)	44,100	Dant & Russell (Bags)
79,800 Lbs.	Florence (Bags)	42,000	Koppers-Hickson (Bags)
39,900 Lbs.	Gainesville (Bags)	31,500	Christian (Bags)
39,900 Lbs.	Grenada (Bags)	42,000	Walker-Williams (Bags)
40,000 Lbs.	Charleston (Blocks)	40,000	Bell Lumber (Blocks)

TOLS004923

# KOPPERS

## Interoffice Correspondence

To R. B. Putman From R. F. Simmons  
Location \_\_\_\_\_ Location \_\_\_\_\_  
Subject \_\_\_\_\_ Date October 7, 1975

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All Koppers Plants and an extensive list of customers have been contacted.

Reflected in sales as of the accounting month closing is 495 gallons of Woodtox 140 RTU at Tuscaloosa, 16837 at Cotton Valley, 6996 gallons at Portland, and 9411 gallons at St. Louis; since closing, 36300 gallons more have shipped from all locations. We don't have hopes for a return of great months in 140 RTU sales, but these sales do show a big improvement over recent months.

Woodtox PrePrime sales continue to be good. We have made a truckload sale to one new customer, Marvin Windows at Warroad, Minnesota, for October and hope to secure another new account also in October.

### V. Assistance Requirements

1. More order for WTC Products
2. Hard sell on Penta. We have to be losing accounts; our customer list now probably totals under twenty accounts, while two years ago, it was well over fifty.
3. Need for lower cost components, particularly for Liquid Noxtane and Lumbrellas.
4. Continued searching for less expensive, better co-solvents.
5. Reallocation of overhead burden.

### VI. General Comments

#### Forecast for October Sales

Penta	Koppers	151,734
	Customers	117,000
	W T C Products	<u>225,000</u>
		\$493,734

TOLS004924

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 7, 1975

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### VII. Travel

September - None

October - Tentative

2 Days Wisconsin

2 Days Tuscaloosa - Cotton Valley

R. F. Simmons

RFS/sjk

TOLS004925

# KOPPERS

cc: F. E. Boge  
 J. D. Hite  
 R. D. Arsenault  
 J. M. Montgomery ←  
 D. F. Taylerson

## Interoffice Correspondence

To R. B. Putman  
 Location Pittsburgh, PA K/1001  
 Subject Monthly Report October 1975  
Wood Treating Chemicals

From R. F. Simmons  
 Location St. Louis, Missouri  
 Date October 31, 1975

### I. Shipment Highlights ~ October Accounting Month

#### - 1. Camden, New Jersey Warehouse

Woodtox PrePrime Concentrate	5 X 55 Gal.	816.75
Woodtox 140 R TU	3 X 55 Gal.	288.75
Penta Wood Pres. Concentrate	2 X 55 Gal.	440.00

#### - 2. Enfield, North Carolina Warehouse

Union Camp Corporation Lumbrella 33 Redwood	Franklin, Virginia 162 X 3 Gal.	3,559.76
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Cands Lumber, Inc. Lumbrella 15 Yellow	Elizabeth City, N.C. 16 X 53 Gal.	3,222.40
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Ramsey Lumber Company Lumbrella 33 Redwood	Suffolk, Virginia 54 X 3 Gal.	1,336.50
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Mason Lumber Company Santobrite Pellets	Washington, N.C. 20 X 100 #	1,120.00
--	--------------------------------	----------

Link Taylor Corporation Liquid Noxtane SS 1	Lexington, N.C. 5 X 55 Gal.	1,677.50
--	--------------------------------	----------

#### Balance of Shipments

Liquid Noxtane SS 1	4 X 55 Gal.	1,274.90
Lumbrella 12 Red/Brown	7 X 53 Gal.	1,423.05
Lumbrella 15 Redwood	6 X 53 Gal.	1,415.10
Lumbrella 33 Redwood	27 X 3 Gal.	668.25
Green End Spray 400	1 X 55 Gal.	278.30
Super Noxtane	24 X 50 #	564.00
Santobrite S Pellets	3 X 100 #	191.76

TOLS004926

BZTO104(e)041747

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

Page 2

### 3. Conley, Georgia Warehouse

Tolleson Lumber Company  
Liquid Noxtane SS1  
Lumbrella 33 Yellow

Perry, Georgia

4 X 55 Gal.	1,342.00
27 X 3 Gal.	<u>668.25</u>
	2,010.25

Holly Hill Lumber Company  
Lumbrella 33 Yellow

Walterboro, South Carolina

54 X 3 Gal.	980.10
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Charles Ingram Lumber Company Florence, South Carolina  
Lumbrella 33 Yellow

54 X 3 Gal.	1,223.10
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Georgia Pacific Corp.  
Green End Spray 400  
Lumbrella 33 Yellow

Monticello, Georgia

10 X 55 Gal.	2,900.64
270 X 3 Gal.	<u>5,076.01</u>
	7,976.65

Georgia Pacific Corp.  
Lumbrella 33 Yellow  
Green End Spray 400

Warrenton, Georgia

189 X 3 Gal.	3,562.63
2 X 55 Gal.	<u>571.09</u>
	4,133.72

Georgia Pacific Corp.  
Lumbrella 33 Yellow  
Green End Spray 400

Cross City, Florida

135 X 3 Gal.	2,596.54
1 X 55 Gal.	<u>294.02</u>
	2,890.56

### Balance of Shipments

Liquid Noxtane SS1  
Lumbrella 15 Yellow

2 X 55 Gal.	632.50
2 X 53 Gal.	<u>434.60</u>

### 4. Newark, California Warehouse

Snyder Lumber Products  
Liquid Noxtane SS1

TOLS004927

Turlock, California  
10 X 55 Gal.

3,190.00
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# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

Page 3

### Newark, California Warehouse Continued

Capitol Industrial Supply	Salem, Oregon	
Liquid Noxtane SS 1	56 X 55 Gal.	14,399.00
Red End Sealer	6 X 55 Gal.	<u>532.95</u>
		<u>14,931.95</u>

PBM Supply	Chico, California	
Liquid Azide 200	4 X 55 Gal.	1,196.80
Liquid Noxtane SS 1	44 X 55 Gal.	<u>11,313.50</u>
		<u>12,510.30</u>

Cascade Industrial Supply	Klamath Falls, Oregon	
Liquid Noxtane SS 1	42 X 55 Gal.	10,799.25

### 5. Tuscaloosa, Alabama Blender Woodtox 140 RTU - Bulk

Commercial Box and Lumber Co.		
Texarkana, Texas	11922 Gal.	9,346.84

Jordan Companies, Inc.		
Memphis, Tennessee	6119 Gal.	4,589.25

Holman Wood Products		
North Port, Alabama	533 Gal.	426.40

Leggett Lumber Company		
Livingston, Texas	6453 Gal.	5,485.05

### 6. Cotton Valley, Louisiana Blender Woodtox 140 RTU - Bulk

Wood Pallet, Inc.		
Dubach, Louisiana	1483 Gal.	1,260.55

TOLS004928

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

Page 4

### Cotton Valley, Louisiana Blender Continued

Bennett Box Company Texarkana, Texas	5920 Gal.	5,032.00
Texas Container and Box Texarkana, Texas	5969 Gal.	5,073.65

### 7. Portland, Oregon Blender

Nikkel Corporation Woodtox 140 R TU	Sacramento, CA 20 X 55 Gal.	1,705.00
Bend Mill Works Woodtox 140 R TU	Bend, Oregon 6591 Gal.	4,943.25
Gilsonite, Inc. Redy Coat Penta Conc.	Portland, Oregon 20 X 55 Gal.	2,530.00
Great Western Chemical Woodtox 140 R TU	Seattle, Washington 3028 Gal.	2,445.11

### Balance of Shipments

WR 340 Concentrate	9 X 408 #	673.20
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### 8. St. Louis, Missouri

#### W T C Products - Major Shipments

Marvin Windows Woodtox PrePrime RTU	Warroad, Minnesota 9938 Gals.	8,140.96
Northern Sash Woodtox PrePrime RTU	Hawkins, Wisconsin 4029 Gals.	3,303.78

TOLS004929

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

Page 5

### St. Louis, Missouri Continued

Hurd Millwork Woodtox PrePrime RTU	Medford, Wisconsin 4025 Gals.	3,300.50
Rockdale Sash Woodtox PrePrime RTU	Joliet, Illinois 4061 Gals.	3,330.02
Crestline Woodtox PrePrime RTU	Wausau, Wisconsin 8059 Gals.	6,608.38
New Way Crating Woodtox PrePrime RTU	Norman, Oklahoma 4804 Gals.	3,939.28
Bennett Box Company Woodtox 140 RTU	Clinton, Iowa 4740 Gals.	4,029.00
Milan Box Company Woodtox 140 RTU	Milan, Tennessee 5084 Gals.	4,933.40
Norton Manufacturing Company Timbertox D-5	Memphis, Tennessee 5737 Gals.	3,556.94
New England Log Homes Woodtox 140 Conc. Woodtox RTU	Great Barrington, Mass. 14 X 55 Gals. 10 X 5 Gals.	2,233.00 <u>117.50</u> 2,350.50
Savogran Company Woodtox S	Addison, Illinois 10 X 5 Gal.	1,410.75
Bell Lumber and Pole Petro Set II	New Brighton, Minn 6 X 459 #	2,120.58

TOLS004930

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

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### St. Louis, Missouri Continued

Michlin Chemical Co.  
WR 340 Conc.

Detroit, Michigan  
20 X 408 #

1,468.80

Canton Chemical Co.  
Penta Wood Pres. Conc.

Canton, North Carolina  
10 X 55 Gal.

2,090.00

Georgia Pacific Corp.  
Lumbrella 33 Yellow

Russellville, South Carolina  
81 X 3 Gal.

1,560.79

Georgia Pacific Corp.  
Lumbrella 33 Yellow

Varneville, South Carolina  
324 X 3 Gal.

6,092.59

Georgia Pacific Corp.  
Super Noxtane

Alcolu, South Carolina  
240 X 50 #

5,623.80

Gulf States Paper  
Lumbrella 33 Yellow  
Green End Spray 400

Vance, Alabama  
135 X 3 Gal.  
1 X 55 Gal.

2,733.75  
316.25  
3,050.00

Sioux Elec. Coop  
Penta Wood Pres. Conc.  
Pole Life T B  
Pole Wrap Paper

Orange City, Iowa  
3 X 55 Gal.  
10 X 280 #  
20 Rolls

660.00  
1,344.00  
156.00  
2,160.00

Weaks Supply  
Timbertreat 625  
Super Noxtane

Natchez, Mississippi  
3 X 55 Gal.  
40 X 50 #

715.28  
874.00  
1,589.28

TOLS004931

# KOPPERS

## **Interoffice Correspondence**

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

**Location** \_\_\_\_\_

**Subject** \_\_\_\_\_

Date October 31, 1975

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### Balance of Shipments

Woodtox 140 Concentrate	5 X 55 Gal.	852.50
Woodtox 140 R TU	1 X 55 Gal.	77.00
Woodtox PrePrime Conc.	6 X 55 Gal.	1,089.00
Woodtox PrePrime R TU	3 X 55 Gal.	305.25
Woodtox R TU	10 X 5 Gal.	117.50
Woodtox R TU	16 X 6 X 1 Gal.	288.00
Penta Wood Pres. Conc.	9 X 55 Gal.	1,892.00
Penta Wood Pres. Conc.	29 X 5 Gal.	652.70
Penta Wood Pres. Conc.	35 X 6 X 1 Gal.	850.50
Penta Wood Prs. R TU	5 X 55 Gal.	412.50
Green-End Spray 400	3 X 55 Gal.	735.08
K L B Beam Sealer	18 X 55 Gal.	1,782.00
Liquid Noxtane S S I	1 X 55 Gal.	335.50
Timbertreat 625	1 X 55 Gal.	280.50
WTC # 74	1 X 460 #	368.00
C Wood Pres.	4 X 50 #	110.80
B Wood Pres.	5 X 5 Gal.	43.75
B Wood Pres.	25 X 6 X 1 Gal.	404.28
Woodtreat AA	15 X 40 #	346.00
Penta Stain # 502	5 X 5 Gal.	107.75
Penta Stain # 506	31 X 5 Gal.	681.25
Penta Stain # 507	2 X 5 Gal.	45.50
Penta Stain # 509	1 X 55 Gal.	206.25
Blue Anstrik Conc.	2 X 5 Gal.	300.00

Penta (October Calendar Month)	Lbs.
F P D Plants	368,952
Customers	250,707
W T C	<u>35,400</u>
Total	655,059

TOLS004932

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

Page 8

### Penta Invoicing (For October Accounting Month)

	1975	1974
F PD	174,972	299,044
Customers	<u>95,838</u>	<u>256,640</u>
- Total	270,810	555,684

### II. Raw Materials

Hercules has again reformulated the X-3492 pigment and apparently we will have a sufficient supply. However, we should not be in a position of only one source and the search for an alternate should continue.

Low end point mineral spirits increased .02/gal. November 1 (up to .42/Gal.)

Lithium Hydroxide increased .03/Lb. to \$ 1.18 per Lb. in truckload quantities, effective November 3.

Fuel oil increased .015/gal. to .346 effective October 15.

Steel drums did increase 60¢ per drum average as anticipated in last months report.

Supply of all material remains adequate and in spite of some supply surpluses, pricing remains firm.

### III. Inventory

There remains almost 8000 gallons of old Woodtox 140 R TU at Tuscaloosa and 25000 gallons at St. Louis. Except for movement of 7000 gallons from Tuscaloosa and 15000 gallons from St. Louis of this 'old product' 140, no other slow moving inventory items have been sold in the last month.

We expect to consummate two deals of swapping pigments that are slow movers for others that are more in use.

TOLS004933

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date October 31, 1975

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### IV. Profit Opportunities

Penta bookings for customers for November are almost nothing -- one T/L for Escambia and 4000 Lbs. for Hess & Sons; 310,000 Lbs. are booked for FPD plants - Oroville, Montgomery, Grenada, Denver and Charleston. With Dow's increased pricing announced and it now over six months since any change in pricing with us and the other competition, and material and labor having increased in the interim, we should be seeing some increase in penta sales.

Woodtox PrePrime continues to be the only WTC product reflecting increasing sales.

### V. Assistance Requirements

Same as last month.

### VI. General Comments

#### Forecast for November Sales

Penta	FPD	180,000
	Customers	75 000
	WTC Products	200,000
		455,000

### VII. Travel

October - None

November - (tentative) - None

R. F. Simmons

RFS/sjk

TOLS004934

cc: F. E. Boge  
J. D. Hite  
J. M. Montgomery  
R. D. Arsenault  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report November 1975  
Wood Treating Chemicals

Date November 26, 1975

### I. Shipment Highlights - November Accounting Month

#### 1. Camden, New Jersey Warehouse

Woodtox PrePrime Conc.	2 X 55 Gal.	363.00
Woodtox PrePrime R TU	4 X 55 Gal.	407.00

#### 2. Enfield, North Carolina Warehouse

Georgia Pacific Corp.	Ahoskie, North Carolina	
Green End Spray 400	2 X 55 Gal.	562.74
Lumbrella 33 Yellow	243 X 3 Gal.	4,537.73
		5,100.47

Coastal Lumber Company	Weldon, North Carolina	
Liquid Noxtane SS 1	4 X 55 Gal.	1,342.00

#### Balance of Shipments

Santobrite Pellets	18 X 100 #	1,131.11
Liquid Noxtane SS 1	5 X 55 Gal.	1,643.95
Lumbrella 12 Red Brown	1 X 53 Gal.	193.19
Super Noxtane	10 X 50 #	235.00

#### 3. Conley, Georgia Warehouse

Georgia Pacific Corp.	Prosperity, South Carolina	
Lumbrella 33 Yellow	135 X 3 Gal.	2,574.02
Green End Spray 400	1 X 55 Gal.	290.56

Union Camp Corp.	Chapman, Alabama	
Lumbrella 33 Redwood	54 X 3 Gal.	1,281.16

Union Point Lumber	Union Point, Georgia	
Lumbrella 15 Yellow	3 X 53 Gal.	651.90

TOLS004935

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location:

Location:

Subject:

Date November 26, 1975

Page 2

### Conley, Georgia Warehouse Continued

Georgia Pacific Corp. Green End Spray 400	Monticello, Georgia 4 X 55 Gal.	1,142.99
Georgia Pacific Corp. Lumbrella 33 Redwood	Russelville, South Carolina 54 X 3 Gal.	1,042.02
Holly Hill Lumber Co. Lumbrella 33 Yellow	Walterboro, South Carolina 27 X 3 Gal.	490.05

### 4. Newark, California Warehouse

Snider Lumber Co. Liquid Noxtane S S !	Turlock, California 10 X 55 Gal.	3,190.00
Capital Ind. Supply Red End Sealer	Salem, Oregon 10 X 55 Gal.	958.38
Reliable Hardware Liquid Noxtane SS1	Arcata, California 2 X 345 Gal.	3,225.75
Liquid Azide 200	4 X 55 Gal.	1,243.55
Orange End Sealer	10 X 55 Gal.	892.93
Liquid Noxtane SS1	18 X 55 Gal.	4,628.25
Clear End Sealer	6 X 55 Gal.	462.83
Clear End Sealer	1 X 300 Gal.	420.75
		10,874.06

### 5. Tuscaloosa, Alabama Blender

Woodtox 140 RTU - Bulk

NO SHIPMENTS

### 6. Cotton Valley, Louisiana Blender

TOLS004936

Woodtox 140 RTU - Bulk

Texas Container	Texarkana, Texas	6114 Gal	5,367.19
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# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date November 26, 1975

Page 3

### 7. Portland, Oregon Blender

Morris Lumber Company Timbertox 40 Conc.	Grant's Pass, Oregon 2 X 345 Gal.	2,553.00
West Coast Mills Woodtox 140 RTU	Chehalis, Washington 1007 Gals.	355.95
Gilsonite, Inc. Redy Coat Penta RTU	Portland, Oregon 20 X 55 Gal.	803.00
Permapost Prod. WR 340 Conc.	Hillsboro, Oregon 6 X 408 #	440.64
Willard Products W R 340 Conc.	Redwood City, CA 6 X 408 #	440.64

### 8. St. Louis, Missouri

#### W T C Products - Major Shipments

##### Koppers Shipments

Koppers Hickson Super Noxtane	Chile 100 X 100 #	5,967.50
Charleston, South Carolina WTC # 71	6 X 515 #	2,688.30
WTC # 7-11	6 X 40 #	<u>192.00</u>
		2,880.30
Houston, Texas WTC # 71	3 X 515 #	1,344.15
Grenada, Mississippi WTC # 71	2 X 515 #	937.30

TOLS004937

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date November 26, 1975

Page 4

### St. Louis, Continued

### Koppers Shipments Continued

Monticello, Mississippi

Liquid Noxtane SS1

Liquid Noxtane 1

Timbertreat 625

1 X 55 Gal.	335.50
2 X 55 Gal.	550.00
1 X 55 Gal.	<u>280.50</u>
	1,166.00

Magnolia, Arkansas

KLB Beam Sealer

18 X 55 Gal.	1,782.00
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Florence South Carolina

Anstrik Blue Conc.

2 X 5 Gal.	300.00
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### Customer Shipments

WM Barr

Woodtox PrePrime Conc.

Memphis, Tennessee

3856 Gals.

5,784.00

Caradco Window

Woodtox PrePrime RTU

Dubuque, Iowa

10941 Gal

8,971.62

Northern Sash and Door

Woodtox PrePrime RTU

Hawkins, Wisconsin

4019 Gal.

3,295.58

Hurd Millwork

Woodtox PrePrime RTU

Medford, Wisconsin

12022 Gals.

9,858.04

Crestline Company

Woodtox PrePrime RTU

Wausau, Wisconsin

4021 Gal.

3,297.22

Malta Mfg

Woodtox PrePrime RTU

Malta, Ohio

5879 Gal.

4,820.78

Weathershield

Woodtox PrePrime RTU

Medford, Wisconsin

4047 Gal.

3,318.54

TOLS004938

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

Location \_\_\_\_\_

Subject \_\_\_\_\_

From R. F. Simmons

Location \_\_\_\_\_

Date November 26, 1975

Page 5

### St. Louis, Continued

Bennett Box Company  
Woodtox 140 RTU

Farmers Union  
Penta Wood Pres. Conc.  
Penta Wood Pres. Conc.

Buchanan Lumber  
Liquid Noxtane 1  
Timbertreat 625

Joe Mullen  
Woodtox PrePrime RTU  
Penta Wod Pres. Conc.

Asplundh Tree Expert  
Poletox

Gulf States Paper  
Lumbrella 33 Yellow  
Green End Spray 400

Georgia Pacific  
Lumbrella 33 Redwood

Chas. Ingram Lumber  
Lumbrella 33 Yellow

Clinton, Iowa  
4869 Gal. 4,138.65

St. Paul, Minn	<u>2,697.30</u>
111 X 6 X 1 Gal.	<u>6,035.00</u>
355 X 5 Gal.	<u>8,732.30</u>

Montgomery, Alabama	<u>2,502.50</u>
10 X 55 Gal.	<u>1,292.50</u>
5 X 55 Gal.	<u>3,795.00</u>

Grandview, Ind.	<u>1,815.00</u>
20 X 55 Gal.	<u>2,090.00</u>
10 X 55 Gal.	<u>3,905.00</u>

Willow Grove, PA	<u>2,150.40</u>
20 X 280 #	

Vance, Alabama	<u>7,350.75</u>
405 X 3 Gal.	<u>316.25</u>
1 X 55 Gal.	<u>7,667.00</u>

Russellville, South Carolina	<u>1,563.91</u>
81 X 3 Gal.	

Florence, South Carolina	<u>1,223.10</u>
54 X 3 Gal.	

TOLS004939

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 26, 1975

Page 6

### Balance of Shipments

Woodtox PrePrime Conc.	1 X 55 Gal.	181.50
Woodtox PrePrime RTU	13 X 55 Gal.	1,212.75
Penta Wood Pres. Conc.	3 X 55 Gal.	616.00
KLB Beam Sealer	1 X 55 Gal.	107.25
Lumbrella 15 Green	2 X 53 Gal.	514.10
Super Noxtane	20 X 50 #	450.00
Anstrik Blue Conc.	1 X 5 Gal.	100.00
B Wood	47 X 6 X 1 Gal.	761.40
Woodtreat AA	117 Tubes	493.20
Woodtreat AA Guns	2 Each	71.76
Woodtreat AA Paper	1 Roll	8.25

### Penta Shipments - November Calendar Month LBS

FPD Plants	745,497
Customers	399,720
W T C	0
	<u>1,145,217</u>

### Penta Invoicing - November Accounting Month - \$

	<u>1975</u>	<u>1974</u>
FPD Plants	166,952	230,312
Customers	178,014	259,544
Total	344,966	489,856

### II. Raw Materials

Supply of all materials remain adequate

No materials have increased except an announced increase of .02/Lb. on Oxo bottoms 1/1/76; this then will be .12/Lb FOB Texas City.

TOLS004940

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date November 26, 1975

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### III. Inventory

We still have 25000 gallons of old Woodtox 140 RTU at St. Louis and some 2500 gallons of Tanil bottoms at Tuscaloosa of questionable quality. (awaiting Hunt Oil inspection)

We are stocking Oxo Bottoms in view of the announced January increase and penta in anticipation of a January increase.

### IV. Profit Opportunities

Penta shipments made in late November plus those on hand for December which should be shipped in time for billing total \$ 56,658 customers, \$237,639 FPD plants now; in addition \$ 102,560 is booked for January billing.

Woodtox Preprime still leads WTC products; some significant sales of Liquid Noxtane and Lumbrella have been made since November accounting month closing.

### V. Assistance Requirements

Same needs as last two months.

### VI. General Comments

#### Forecast For December Sales

Penta - FPD	\$ 265,000
Customer	\$ 125,000
WTC Products	\$ 150,000
	\$ 540,000

### VII. Travel

November - None

December 1 Day Cordova, Alabama  
1 Day Tuscaloosa, Alabama

R. F. Simmons

TOLS004941

RFS/sjk

cc: F. E. Boge  
J. D. Hite  
J. M. Montgomery ←  
R. D. Arsenault  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location Pittsburgh, PA K/1001

Location St. Louis, Missouri

Subject Monthly Report December 1975  
Wood Treating Chemicals

Date December 23, 1975

### I. Shipment Highlights December Accounting Month

#### 1. Camden, New Jersey Warehouse

State of Conn	Portland, Conn.	
Penta Wood Pres. Conc.	8 X 55 Gal.	\$ 1,496.00
W. W. Babcock	Bath, New York	
Woodtox Pre Prime RTU	10 X 55 Gal.	907.50
Amber # 509 Penta Stain	2 X 55 Gal.	412.50
<u>Balance of Shipments</u>		
Woodtox 140 R.T.U	6 X 55 Gal.	577.50
Woodtox Pre-Prime R.T.U	3 X 55 Gal.	305.25
Penta Wood Pres. Conc.	2 X 55 Gal.	440.00
Penta Stain # 509 Amber	1 X 55 Gal.	206.25

#### 2. Enfield, North Carolina Warehouse

L. R. Foreman	Elizabeth City, North Carolina	
Lumbrella 15 Yellow	16 X 53 Gal.	\$ 3,222.40
Georgia Pacific Corp.	Port Wentworth, Georgia	
Santobrite Pellets	20 X 100 # Drums	\$ 1,120.00
Georgia Pacific Corp.	Ahoskie, North Carolina	
Lumbrella 33 Redwood	216 X 3 Gal.	\$ 3,920.40
Union Camp Corp.	Franklin, Virginia	
Lumbrella 33 Redwood	162 X 3 Gal.	\$ 3,614.77

TOLS004942

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date December 23, 1975

Page 2

### Balance of Enfield's Shipments

Super Noxtane	40 X 50 # Bag	\$ 920.00
Lumbrella 25 Cherry Tone	1 X 53 Gal.	\$ 274.28
Lumbrella 12 Red Brown	2 X 53 Gal.	\$ 386.37
Lumbrella 33 Red Wood	54 X 3 Gal.	\$ 1,336.50
Lumbrella 15 Red Wood	7 X 53 Gal.	\$ 1,650.95

### 3. Conley, Georgia Warehouse

Westvaco Delv. Corp. Liquid Noxtane S S 1	Summerville, South Carolina 10 X 55 Gal.	\$ 3,190.00
Holly Hill Lumber Company Lumbrella 33 Yellow	Walterboro, South Carolina 135 X 3 Gal.	\$ 2,450.25
Georgia Pacific Corp. Lumbrella 33 Yellow Green End Spray 400	Monticello, Georgia 135 X 3 Gal. 4 X 55 Gal.	\$ 2,450.25 <u>\$ 1,149.11</u> <u>\$ 3,599.36</u>
Georgia Pacific Corp. Lumbrella 33 Yellow	Cross City, Florida 135 X Gal.	\$ 2,450.25
Union Camp Corp. Lumbrella 33 Yellow	Folkston, Georgia 162 X 3 Gal.	\$ 3,086.78
Dickert Lumber Company Liquid Noxtane S S 1	Newberry, South Carolina 3 X 55 Gal.	\$ 1,006.50
Koppers Company, Inc. Liquid Noxtane S S 1	Riceboro, Georgia 2 X 55 Gal.	\$ 671.00

TOLS004943

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date December 23, 1975

Page 3

### 4. Newark, California Warehouse

Reliable Hardware Company	Arcata, California	
Blue End Sealer	3 X 55 Gal.	273.49
Orange End Sealer	3 X 55 Gal.	259.46
Clear End Sealer	2 X 55 Gal.	154.28
Clear End Sealer	2 X 300 Gal.	841.50
Liquid Noxtane S S 1	26 X 55 Gal.	<u>6,685.25</u>
		\$ 8,213.98

Alpha Industrial Supply	Nevada City, California	
Liquid Noxtane S S 1	13 X 55 Gal.	3,732.30
Liquid Azide 200	7 X 55 Gal.	<u>2,390.85</u>
		6,123.15

Snider Lumber	Turlock, California	
Liquid Noxtane S S 1	10 X 55 Gal.	3,190.00

### Balance of Shipments

Red End Sealer	5 X 55 Gal.	544.50
Liquid Noxtane S S 1	2 X 55 Gal.	671.00

### 5. Tuscaloosa, Alabama Blender

#### Woodtox 140 R T U - Bulk

Bennett Box Company	Texarkana, Texas	5364 Gal.	4,023.00
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### 6. Cotton Valley, Louisiana Blender

#### Woodtox 140 R T U - Bulk

Milan Box Company	Milan, Tennessee	6037 Gal.	5,131.45
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Texas Container	Texarkana, Texas	5988 Gal.	5,089.80
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TOLS004944

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From R. F. Simmons  
 Location \_\_\_\_\_  
 Date December 23, 1975

Page 4

### 7. Portland, Oregon Blender

Willard Products Timbertox 40	Redwood City, California 4001 Gal.	9,202.30
Brewer Chemical Corp. Woodtox 140 Conc.	Honolulu, Hawaii 40 X 55 Gal.	5,346.00
R. F. Nikkel Company Woodtox 140 R T U	Sacramento, California 20 X 55 Gal.	1,449.25
Cascade Industrial Supply Woodtox Pre Prime RTU Woodtox 140 R T U Woodtox PrePrime R T U	Klamath Falls, Oregon 60 X 55 Gal. 40 X 55 Gal. 1572 Gal.	4,207.60 2,618.00 <u>1,414.80</u> <u>8,240.40</u>
Jasco Chemical Co. Woodtox 140 Conc.	Mt. View, California 2995 Gal.	4,941.75
Northwest Lumber and Plywood Arlington, Washington Woodtox 140 R T U	7197 Gal.	5,541.69
Gilsonite, Inc. Redy Coat Penta Conc.	Portland, Oregon 40 X 55 Gal.	5,060.00
J. H. Baxter Company Petroset II	Dales, Oregon 4 X 460 Lb. Drums	1,416.90
P B M Supply Woodtox PrePrime T Conc.	Chico, California 1 X 55 Gal.	163.35

TOLS004945

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date December 23, 1975

Page 5

### 8. St. Louis, Missouri

#### W T C Products - Major Shipments

##### Koppers Shipments

Magnolia, Arkansas KLB Bean Sealer	10 X 55 Gal.	990.00
Montgomery, Alabama WTC # 71	2 X 515 #	937.30
Riceboro, Georgia Liquid Noxtane S S 1	2 X 55 Gal.	671.00
Gainesville, Florida W T C # 71	1 X 515 #	486.65
Durant, Mississippi Liquid Noxtane S S 1 Timbertreat 625	1 X 55 Gal. 1 X 55 Gal.	335.50 280.50
N. Little Rock Penta Check	6 Quarts	57.42
Northern Sash Woodtox PrePrime R T U	Hawkins, Wisconsin 4101 Gal.	3,362.82
Crestline Woodtox PrePrime RTU	Wausau, Wisconsin 4073 Gal	3,339.86
Wabash Woodtox PrePrime RTU	Memphis, Tennessee 4101 Gal.	3,362.82
Hurd Millwork Woodtox PrePrime RTU	Medford, Wisconsin 4080 Gal.	3,345.60

TOLS004946

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date December 23, 1975

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### St. Louis, Missouri Continued

Caradco Window Woodtox PrePrime RTU	Dubuque, Iowa 5902 Gal.	4,839.64
Vetters Mfg. Company Woodtox Pre Prime RTU	2500 Gal. Stevens Point, Wisconsin	2,050.00
Rockdale Sash and Trim Woodtox PrePrime RTU	Joliet, Illinois 4073 Gal.	3,339.86
W M Barr Company Woodtox PrePrime Conc.	Memphis, Tennessee 4030 Gal.	8,463.00
Unadilla Silo Company Woodtox Pre Prime Conc.	Unadilla, New York 8 X 55 Gal.	1,452.00
Universal Coop Penta Wood Pres. Conc.	Columbus, Ohio 5994 Gal.	14,685.30
Weyerhaeuser Company Liquid Noxtane S S 1	Plymouth, North Carolina 52 X 55 Gal.	15,730.00
Weyerhaeuser Company S P S 30 % Solution	Craig, Oklahoma 10148 Gal.	11,771.68
Westvaco Dev. Lumbrella 15 Red/Brown	Summerville, South Carolina 15 X 53 Gal.	2,822.25
Southern Wood Piedmont WTC # 71	Wilmington, North Carolina 3 X 515 #	1,344.15

TOLS004947

# KOPPERS

## Interoffice Correspondence

To R. B. Putman  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From R. F. Simmons  
Location \_\_\_\_\_  
Date December 23, 1975

Page 7

### Balance of Shipments

Woodtox 140 Conc.	4 X 55 Gal.	682.00
Woodtox 140 R T U	1 X 55 Gal.	96.25
Woodtox R T U	1 X 55 Gal.	162.25
Woodtox 152 R T U	2 X 55 Gal.	220.00
Woodtox Pre Prime Conc.	3 X 5 Gal.	54.75
Penta Wood Pres. Conc.	6 X 55 Gal.	1,320.00
W K - 60 Solvent	2 X 55 Gal.	115.50
K L B Beam Sealer	1 X 55 Gal.	107.25
Wood Seal Wax	20 X 40 Lb.	368.00
Petroset II	2 X 460 Lb.	708.40
Timbertreat 625	2 X 55 Gal.	561.00
Woodtreat AA	30 X 40 Lb.	574.00
C Wood Pres.	2 X 50 #	58.00
B Wood Pres.	1 X 6 X 1 Gal.	16.20
Penta Stain # 502	2 X 50 #	45.50
Penta Stain # 508	2 X 5 Gal.	45.50

Penta Shipments - December Calendar Month - LBS

FPD Plants	520,398 *
Customers	243,635 *
W T C	<u>142,600</u>
	906,633 *

\* Subject to minor correction due  
to block shipments.

Penta Invoicing - December Accounting Month - \$

	<u>1975</u>	<u>1974</u>
FPD Plants	294,191	182,359
Customers	108,139	282,035
Total	402,330	464,394

TOLS004948

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date December 23, 1975

Page 8

### II. Raw Materials

Supply continues adequate, all materials.

No further increases of materials announced except a few pigment dispersions, those included are used in redwood and cherry Lumbrella.

Two mineral spirit suppliers backed off announced .02/gal. increases to stay competitive.

### III. Inventory

Approximately \$ 8000 of slow moving pigment dispersions were returned in December for credit. 25000 gallons of old spec Woodtox 140 R TU remains in St. Louis for disposal; so large an amount has all our available tankage for 140 tied up and new spec. material can only be made on order.

18000 Gallons of Oxo Bottoms will arrive before month-end to beat the .02/Lb increase; this will represent a 'four month plus' stock.

Penta was not stocked in December, but unless otherwise discussed, we will stock in January for anticipated increases Feb. 1.

### IV. Profit Opportunities

Orders are booked for 390,000 pounds of penta for January with FPD. If there is a little price info leakage to customers, we should have a million pound total month.

Millwork preprime solution sales continues good. There is \$ 30,000 of Lumbrella sales booked for January.

TOLS004949

# KOPPERS

## Interoffice Correspondence

To R. B. Putman

From R. F. Simmons

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date December 23, 1975

Page 9

V. Same needs as now requested for three months.

### VI. General Comments

WTC St. Louis will be closed 1/2 day 12/24 and all day 12/25, 26, 1/1 and 2

Forecast for January Sales - \$

Penta - F P D	275,000
Customers	105,000
WTC Products	200,000
	\$ 580,000

### VII. Travel

December 9 - Vulcan Asphalt, Cordova, Alabama  
December 29 - 31 - Vacation

None for January at this time.

R. F. Simmons

RFS/sjk

TOLS004950

# KOPPERS

## Interoffice Correspondence

cc: T. A. Beatty  
F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. F. Taylerson

To J. D. Hite  
Location K-1001  
Subject Monthly Report January 1977  
Wood Treating Chemicals

From R. F. Simmons  
Location St. Louis, Mo.  
Date February 3, 1977

### (1) Shipments - January Accounting Month

#### 1. Camden, New Jersey Warehouse

Penta Wood Pres. Conc. 12 X 55 Gal.  
Woodtox S Conc. 10 X 55 Gal.

#### 2. Enfield, North Carolina Warehouse

Lumbrella 33 Redwood S	6 X 55 Gal.
Lumbrella 33 Redwood H	27 X 3 Gal.
Lumbrella 33 Redwood S	27 X 3 Gal.
Lumbrella 15 Redwood	2 X 55 Gal.
Green End Spray 400	1 X 55 Gal.
NTA NA 3 Crystals	1 X 50 Lbs.

#### 3. Conley, Georgia Warehouse

Lumbrella 33 Redwood S	6 X 55 Gal.
Lumbrella 15 Clear	1 X 55 Gal.
Lumbrella 33 Yellow S	65 X 3 Gal.
Lumbrella 33 Clear	10 X 55 Gal.
Green End Spray 400	3 X 55 Gal.

#### 4. Newark, California Warehouse

Liquid Noxtane SSI	2 X 345 Gal.
Liquid Noxtane SSI	122 X 55 Gal.
Liquid Azide 200	10 X 55 Gal.
Clear End Sealer	5 X 55 Gal.
Red End Sealer	5 X 55 Gal.

TOLS004951

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### 5. Cotton Valley, Louisiana Blender

Woodtox 140 RTU

6068 Gal. Bulk

### 6. Portland, Oregon Blender

Woodtox Preprime RTU

6124 Gal. Bulk

Woodtox 140 RTU

20 X 55 Gal.

WR 340 Conc.

6 X 408 Lbs.

### 7. Sauget, Illinois Blender

Penta Wood Pres. Conc.

4327 Gal. Bulk

### 8. Phoenix, Arizona Blender

Woodtox 140-T RTU

6663 Gal. Bulk

### 9. St. Louis, Missouri Plant

Woodtox Preprime RTU

28510 Gal. Bulk

Woodtox Preprime RTU

2 X 55 Gal.

Woodtox Preprime Conc.

4020 Gal. Bulk

Woodtox Preprime Conc.

15 X 55 Gal.

Woodtox 140 RTU

6126 Gal. Bulk

Woodtox 140 RTU

7 X 55 Gal.

Woodset 310 Conc.

3 X 5 Gal.

Penta Wood Pres Conc.

6 X 55 Gal.

Penta Wood Pres. Conc.

64 X 5 Gal.

Penta Wood Pres. Conc.

83 X 6 X 1 Gal.

Penta Wood Pres. RTU

6 X 55 Gal.

Penta Wood Pres. RTU

4 X 5 Gal.

Woodtreat AA

5 X 40 Lbs.

Poletox

400 X 60 Lbs.

KLB Beam Sealer

12 X 55 Gals

Petroset II

10 X 460 Lbs.

Lumbrella 33 Yellow

864 X 3 Gal.

TOLS004952

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Anstrik Blue Conc.	6 X 5 Gal.
WTC #71	4 X 515 Lbs.
Penta Stain #502	5 X 5 Gal.
Penta Stain #506	10 X 5 Gal.
Penta Stain #507	5 X 5 Gal.

### Penta Shipments (Lbs.) January Calendar Month

	1977	1976	1975
FPD Plants	300,689	395,335	664,590
Customers	332,471	301,893	305,754
WTC	122,030	70,700	0
	<u>755,190</u>	<u>767,928</u>	<u>970,344</u>

### Invoicing - January 1977 Accounting Month -\$

	1977	1976	1975
FPD Plants Penta	176,297	149,592	307,018
Customers Penta	102,211	62,512	240,957
WTC Products	170,369	129,753	155,682
	<u>448,877</u>	<u>341,857</u>	<u>703,647</u>

### (II) Raw Materials

Penta - Plant closed Jan. 8 for approximately ten days of repairs. As we have not been able to determine the status of start-up today, it is assumed there still is no operation. Cold and inclement weather can be blamed for part of the seeming slow showing. As of 1/31/77 we still have 670,000 pounds of inventory not assigned to orders, so the shutdown still is not critical to us, but could get to be by the end of next week, if production is not resumed.

TOLS004953

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Solvents - One major mineral spirits producer has announced a 2-1/2¢ per gallon increase effective March 1; some, if not all producers, will follow suit shortly. There is considerable refinery product shifting at this time, presumably trying to get maximum fuel oil production. Consequently one P-9 source (Lion Oil @Eldorado, Ark.) has stopped production and others are tightening, while most other aromatics are increasing in cost.

### (III) Inventory

Year-end Physical Evaluation	St. Louis	\$373,767
	All Other WTC Locations	285,483

### January 1977 Purchases

Raw Material	96,033
Containers	8,952
Resale Stock	6,874

Raw Material Converted to Finished Goods in January	123,919
January operating expense, incl. rent, frt, & whse	4,965

### (IV) February Sales Forecast

	Lbs.	\$	\$ Feb. 1976
FPD Penta	320,000	134,000	163,210
Customers Penta	405,000	170,000	100,354
WTC Products		150,000	139,335

### (V) Assistance Requirements

1. By April 1 we will have sold out of Timbertreat 625. What do we then make/buy and sell for bark beetle control?

TOLS004954

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

2. With deregulation of natural gas, our supply of co-solvents made from it could be in jeopardy; these are all the Eastman products - KB-3, B-6 and B-6HB. Obviously, without KB-3 in particular, we'd be in real trouble. We continue to need a good, inexpensive co-solvent.

3. Announced 2-1/2¢ gal. increase on LEP, Rule 66 mineral spirits by Amsco for March 1 plus anticipated Oxo Bottoms increase by the end of the first quarter will put us in a poor market position on Preprime unless our competition soon raises their price. We have been blending materials to produce the most inexpensive spirits possible and will continue to do so with the most advantageously priced materials available, but feel other producers will follow Amsco's lead and that, coupled with the anticipated Oxo increase will really hurt. Alternates needed.

4. Label change review still taking too long. Two months for review of Lumbrella 33 (non-registered product) is ridiculous.

### (VI) General Comments

January and February sales curtailed by adverse weather. St. Louis, this January, used more than double normal winter month fuel usage and some production was curtailed, but no orders failed to ship.

### (VII) Travel & Meetings

#### January

1 day - Pittsburgh meeting with Monsanto  
1 evening - Missouri Pesticide Dealer Seminar  
1/4 days - Eastman & Lithium Corp. salesmen

#### February

1 day - Missouri Pesticide Dealer Meeting 9th  
1 day - Manufacturing Chemists Ass'n. Seminar 23th  
1 day - Atlanta/Macon Warehouse Indoctrination

H. Struessel attended BHC/Lindane EPA conference at Washington Jan. 31 with J. Dougherty and C. Brush.

R. F. Simmons

TOLS004955

# KOPPERS

## Interoffice Correspondence

cc: T. A. Beatty  
F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. GILL  
T. C. Hayson  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. F. Taylorson

To J. D. Hite  
Location K-1001  
Subject Monthly Report 1977  
Wood Treating Chemicals

From R. F. Simmons  
Location St. Louis, Mo.  
Date March 3, 1977

### (1) Shipments February Accounting Month

#### 1. Camden, New Jersey Warehouse

Woodtox 140 RTU	3 X 55 Gal.
Penta Stain #509	2 X 55 Gal.
Super Noxtane	16 X 50 Lbs.

#### 2. Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 15 Yellow	16 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Redwood S	6 X 55 Gal.
Lumbrella 33 Redwood S	81 X 3 Gal.
Liquid Noxtane SSI	1 X 55 Gal.
Green End Spray 400	2 X 55 Gal.

#### 3. Conley, Georgia Warehouse

Lumbrella 33 Redwood S	13 X 55 Gal.
Green End Spray 400	2 X 55 Gal.

#### 4. Newark, California Warehouse

Liquid Noxtane SSI	2 X 305 Gal.
Liquid Noxtane SSI	6 X 345 Gal.
Liquid Noxtane SSI	284 X 55 Gal.
Liquid Azide 200	22 X 55 Gal.
Clear End Sealer	1 X 300 Gal.
Clear End Sealer	4 X 55 Gal.
Orange End Sealer	8 X 55 Gal.
Blue End Sealer	6 X 55 Gal.

TOLS004956

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### 5. Cotton Valley, Louisiana Blender

Woodtox 140 RTU                    6042 Gal. Bulk

### 6. Portland, Oregon Blender

Woodtox Preprime RTU	1509 Gal. Bulk
Woodtox 140 Conc.	4991 Gal. Bulk
Woodtox 140 RTU	1038 Gal. Bulk
Timbertox 40 Conc.	3951 Gal. Bulk
Redy Coat Penta Conc.	20 X 55 Gal.
Redy Coat Penta RTU	20 X 55 Gal.
Woodtox 140 Conc.	1 X 55 Gal.
Woodtox 140 RTU	1 X 55 Gal.
Woodtox Preprime RTU	81 X 55 Gal.

### 7. Saugat, Illinois Blender

Penta Wood Pres. Conc.            4247 Gal. Bulk

### 8. Phoenix, Arizona Blender

Woodtox 140-T RTU                7020 Gal. Bulk

### 9. St. Louis, Missouri Plant

Woodtox Preprime RTU	q	34652 Gal. Bulk
Woodtox RTU		5119 Gal. Bulk
Woodtox 140 RTU		10469 Gal. Bulk
Woodtox Preprime Conc.		7 X 55 Gal.
Woodtox Preprime RTU		13 X 55 Gal.
Woodtox 140 Conc.		30 X 55 Gal.
Woodtox 140 RTU		4 X 55 Gal.
Penta Wood Pres. Conc.		12 X 55 Gal.
Penta Wood Pres. RTU		3 X 55 Gal.
Penta Wood Pres. RTU		1 X 5 Gal.
Petroset II		6 X 460 Lbs.

TOLS004957

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Woodseal Wax	1 X 426 Lbs.
Clear End Sealer	1 X 5 Gal.
KIB Beam Sealer	12 X 55 Gal.
Blue Anstrik Conc.	12 X 5 Gal.
Liquid Noxtane SSI	73 X 55 Gal.
Timbertreat 625	15 X 55 Gal.
WR-340	90 X 400 Lbs.
Lumbrella 15 Light Green	1 X 55 Gal.
Lumbrella 15 Yellow	36 X 55 Gal.
Lumbrella 15 Redwood	18 X 55 Gal.
Lumbrella 25 Brown	5 X 55 Gal.
Lumbrella 33 Yellow	27 X 3 Gal.
Lumbrella 33 Redwood S	81 X 3 Gal.
WTC #7-11	1 X 440 Lbs.
WTC #71	2 X 515 Lbs.
WTC #74	2 X 460 Lbs.
Dowicide GST Beads	200 X 50 Lbs.
Woodtreat AA	3 X 40 Lbs.
Penta Stain #508	10 X 5 Gal.
Penta Stain #509	2 X 55 Gal.

### Penta Shipments (Lbs.) February Calendar Month

	1977	1976	1975
FPD Plants	398,331	340,060	39,900
Customers	290,860	211,542	131,561
WTC	67,650	31,700	40,811
	<u>756,841</u>	<u>583,302</u>	<u>212,272</u>

### Invoicing (\$) February Accounting Month

	1977	1976	1975
FPD Plants Penta	134,009	163,210	67,630
Customers Penta	131,482	100,354	72,978
WTC Products	289,341	139,335	181,063
	<u>554,832</u>	<u>402,899</u>	<u>321,671</u>

TOLS004958

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### (II) Raw Materials

Penta - Plant returned to normal operations after repairs Feb. 4 with no lost business. Despite a complaint about one load of penta that had above normal fine content proven and one other complaint for which fines content was not available, Monsanto is continuing to load most bulk penta now through the manufacturing plant conveyor and hopper. The only exception to this loading has been those bulk orders that have to be loaded on Monday (before any production for the week would be available) or on days where two bulk loads have to be shipped. We are certainly hopeful that with the coming of warmer, more humid weather Monsanto can be persuaded to return entirely to breaking bags for filling bulk orders before we have a rash of complaints concerning fine contents and compaction into lumps.

One carload of penta shipped Feb. 23 to Wichita warehousing and OMD has been notified of its availability.

Monsanto is having some troubles in getting a northwest coast warehouse on stream. Their Seattle plant will not be available for 3 to 4 months; they have contacted 12 other possibilities (including Monsanto's Eugene, Oregon plant) and at this time only have one concern willing to short-term warehouse penta. Warehouse rates are state government controlled in Washington and as such, are not very acceptable in cost to Monsanto; therefore, John Mc Phillips is working on the Seattle plant for a more acceptable date.

Solvents - As reported last month, all producers are following AMSCO'S lead in raising mineral spirit prices on all grades of low aromatic content product; the cheap grades (with high aromatics which we cannot use) are not changing.

Pigments - Most colors have again experienced several cents per pound increase from one source. Our other major source raised prices also, but fortunately for us, missed most of the colors we buy.

TOLS004959

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### (III) Inventory & Expenses

January Closing Evaluation	623,085
February Purchases-	
Raw Material	136,248
Containers	17,364
Resale Stock	49,075
Total	825,772
February Raw Material conversion to Finished Goods	(163,475)
Estimated Feb. Cost of Goods Sold	222,500
Estimated Feb. Closing Inventory	603,272
Estimated Mar. Closing Inventory	640,000
Estimated Apr. Closing Inventory	650,000

February Expenses	
Detail 130 Safety	\$277
170 Rent	25
190 Office Supply	290
270 Telephone	362
290 Postage	4
331 Tankcar Expenses	(631)
351 Repair & Maint.	299
381 Fuel & Power	302
390/392 Op. Supply	801
520 Prof. Svcs.	677
170/390/395 Warehouses	6488
Noxane Pumps	2283

TOLS004960

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### (IV) Sales Forecast

	March	April	May	Comparison March 1976
FPD Penta	206,000	175,000	200,000	131,413
Customer Penta	195,000	175,000	190,000	189,048
WTC Products	200,000	200,000	225,000	240,423
	601,000	550,000	615,000	560,884

### (V) Assistance Requirements

Need new co-solvents less expensively priced.

Request Pittsburgh help getting proper overhead distribution as well as reflection of pump costs to Liquid Noxane product.

### (VI) General Comments

Continuing price increases of petroleum products and materials requiring high energy to produce, i.e. pigments & dyes, are going to force us to keep a sharp eye on product costs and selling price.

### (VII) Travel & Meetings

#### February

23rd Manufacturing Chemists Assoc. seminar on Federal Toxic Substances Control Act. (See separate report submitted for important points.)

24th C. Brush - Jan Redd visit to WTC, labeling discussion.

#### March

2-3 days Lower Ontario with prospective Timbertreat 625 blenders.

1-2 days Georgia - WTC warehouse.

9th - H. Struessel will attend EPA Region VII TOSCA conference, Kansas City.

R. F. Simmons

TOLS004961

# KOPPERS

cc: T. A. Beatty      T. C. Hayson  
 F. E. Boge      F. M. Klasnick  
 J. F. Bridges      J. M. Montgomery  
 J. R. Brummett      J. D. Palmer  
 G. J. Gill      D. F. Taylerson

## Interoffice Correspondence

To John D. Hite  
 Location Pittsburgh K/1001  
 Subject Monthly Report - March 1977  
 Wood Treating Chemicals Department

From R. F. Simmons  
 Location St. Louis, Missouri  
 Date April 1, 1977

### I. SHIPMENTS MARCH ACCOUNTING MONTH

#### 1. Camden, New Jersey Warehouse

Penta Wood Preservative Concentrate	21 X 55 Gal.
Penta Wood Preservative Ready-to-Use	1 X 55 Gal.
Woodtox Preprime Concentrate	2 X 55 Gal.
Woodtox 140 Ready-to-Use	8 X 55 Gal.

#### 2. Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	5 X 53 Gal.
Lumbrella 33 Redwood S	16 X 55 Gal.
Lumbrella 33 Redwood H	54 X 3 Gal.
Lumbrella 25 Brown	3 X 55 Gal.
Liquid Noxtane SS-1	8 X 55 Gal.
Green End Spray 400	2 X 55 Gal.

#### 3. Conley, Georgia Warehouse

Lumbrella 33 - Clear	9 X 55 Gal.
Lumbrella 33 - Yellow S	8 X 3 Gal.
Green End Spray - 400	5 X 55 Gal.
Liquid Noxtane SS-1	10 X 55 Gal.
Dowicide G-ST Beads	5 X 100 Lbs.

#### 4. Newark, California Warehouse

Liquid Noxtane SS-1	44 X 55 Gal.
Pallets	44 X Each

TOLS004962

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# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 2

5.	Cotton Valley, Louisiana Blender	
	Woodtox 140 Ready-to-Use	6055 Gal. Bulk
6.	Portland, Oregon Blender	
	WR 340 Concentrate	42 X 408 lbs.
	Woodtox Preprime Ready-to-Use	11156 Gal. Bulk
	Woodtox 140 Concentrate	40 X 55 Gal.
	Redy Coat Penta Concentrate	24 X 55 Gal.
	Redy Coat Penta Ready-to-Use	32 X 55 Gal.
	Timbertox 40 Concentrate	10 X 55 Gal.
	Petroset	3 X 461 Lbs.
7.	Sauget, Illinois Blender	
	Penta Wood Preservative Concentrate	8343 Gal. Bulk
8.	Phoenix, Arizona Blender	
	Woodtox 140 T-Ready-to-Use	6784 Gal. Bulk
9.	St. Louis, Missouri Plant	
	Woodtox Preprime Ready-to-Use	28111 Gal. Bulk
	Woodtox Preprime Ready-to-Use	14 X 55 Gal.
	Woodtox Preprime Concentrate	7960 Gal. Bulk
	Woodtox Preprime Concentrate	3 X 55 Gal.
	Woodtox Ready-to-Use	4758 Gal. Bulk
	Woodtox 140 Ready-to-Use	25 X 55 Gal.
	Woodtox 140 Concentrate	1 X 55 Gal.
	Woodtox 152 Ready-to-Use	8 X 55 Gal.
	Woodtox Ready-to-Use	6 X 5 Gal.
	Penta Wood Preservative Ready-to-Use - Dark	1 X 55 Gal.
	Penta Wood Preservative Ready-to-Use - Dark	4 X 5 Gal.

TOLS004963

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# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 3

### 9. St. Louis, Missouri Plant (Continued)

Penta Wood Preservative Ready-to-Use	7	X	55	Gal.
Penta Wood Preservative Ready-to-Use	20	X	5	Gal.
Penta Wood Preservative Concentrate	6	X	55	Gal.
Penta Wood Preservative Concentrate	7	X	5	Gal.
Poletox	42	X	380	Lbs.
Woodtreat AA	14	X	40	Lbs.
Liquid Noxtane SS-1	3	X	55	Gal.
Super Noxtane	20	X	50	Lbs.
Dowicide G-ST Beads	2	X	100	Lbs.
Anstrik Blue Concentrate	1	X	55	Gal.
WTC #71	11	X	515	Lbs.
WTC #74	2	X	460	Lbs.
Wolman Pre-Stain	3	X	55	Gal.
Timbertreat 625 Concentrate	2	X	55	Gal.
Timbertreat 625 Concentrate	6	X	5	Gal.
Green End Spray - 400	4	X	55	Gal.
Clear End Sealer	4	X	55	Gal.
Red End Sealer	1	X	55	Gal.
KLB Beam Sealer	8	X	55	Gal.
KLB Beam Sealer	3	X	5	Gal.
Wood Seal Wax	1	X	426	Lbs.
Penta Stain #502	69	X	5	Gal.
Penta Stain #505	1	X	55	Gal.
Penta Stain # 506	6	X	5	Gal.
Penta Stain #507	30	X	5	Gal.
Penta Stain #508	1	X	5	Gal.
Penta Check	6	X	1	Qts.

TOLS004964

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# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 4

### Penta Shipments (Lbs.) March Calendar Month

	<u>1977</u>	<u>1976</u>	<u>1975</u>
FPD Plants - Penta	527,809*	494,863	327,341
Customers - Penta	513,408*	546,744	117,800
WTC Products	<u>63,930</u>	<u>48,150</u>	<u>40,497</u>
	1,105,147	1,089,757	485,638

\*Includes Block & Bulk Loads subject to minor corrections.

### Invoicing (\$) March Accounting Month

	<u>1977</u>	<u>1976</u>	<u>1975</u>
FPD Plants - Penta	188,102	131,413	16,758
Customers - Penta	233,948	189,048	125,737
WTC Products	<u>171,267</u>	<u>240,423</u>	<u>149,140</u>
	593,317	560,884	291,614

## II. RAW MATERIALS

### Penta

No problems, no customer complaints this month. Our customer contacts have a 'wait & see' attitude toward the Michigan incidents.

### Monsanto Penta Concentrate

Monsanto plant production problems plague this operation: Sometimes there is not enough production; if there is sufficient quantity produced, it mysteriously is off in quality, either too high or low in penta content or too high in water content to ship and each time this happens we have to

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# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 5

### Monsanto Penta Concentrate (Continued)

postpone customer shipments 3 to 5 days. In addition about every three months Monsanto manages to lose several thousand pounds of our oil (which we debit to them), most every truck handled by them, either oil or product accrues detention demurrage on their end of the operation (also debited to them) and this necessitates a lot of checking on their operation, which should not be necessary.

### Solvents -

LEP exempt mineral spirits are stabilizing in cost at \$0.48 delivered; continuing our blending scheme, our costs will be \$0.46. Regular exempt spirits are now \$0.44 to \$0.45. Eastman raised KB-3 a half-cent per pound effective April 1, 1977. Dow-Badische has approached us with a number of bottom materials, however nothing yet with the solvency of KB-3 that matches cost. Isopropyl alcohol raised \$0.10 per gallon and two aromatic solvents we use in low volume raised \$0.05 per gallon.

### Tetra-Penta

The blended material Reichhold has been supplying us for several years for Liquid Noxtane production (since Monsanto priced their Penta 60 out of business) has also been discontinued. We had previously in periods of shortage used 50% Tetra and 50% Penta from Reichhold before, but this time the Reichhold penta contains an over abundance of alkali insoluble material that eventually precipitates after drumming the product and in spite of our usual 25 micron filtering. Quality-wise, the product is good and the light floc precipitate will not clog our dispensing pumps now, but it is not desirable aesthetically and in cold winter months the floc could seed the solution for metaborate precipitation and render the product unsalable.

TOLS004966

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# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 6

### Tetra-Penta (Continued)

Suggested addition of Armak Ethomeen C/12 did help some, but balancing the partial results achieved with tendency to foam caused in the product has ruled out its use. Filter cartridges to fit our filter unit are available in a number of smaller sizes and these will be tried; it has been our experience however, that floc of this nature cannot be filtered out without increasing tremendously the time consumed and thus raising costs.

We are currently testing product made with Reichhold Tetra and Dowicide EC-7 and (as much as we dislike to admit it) the formulation is looking great to this point. Further, it is expected the additional cost incurred in purchasing EC-7 will be offset by less need for filtration and greater ease in manufacture.

### III. INVENTORY AND EXPENSES

February Closing Inventory		636,621
March Purchases		
Raw Material	144,425	
Containers	1,305	
Resale Stock	8,738	
Total	154,468	

March Raw Material conversion to finished goods	(130,798)
Estimated March Cost of Goods Sold	149,000
Estimated March Closing Inventory	642,089
April	650,000
May	670,000

TOLS004967

BZTO104(e)041788

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

Page 7

### March Expenses

Detail	130	Safety	\$ 625
	170	Rent	25
	190	Utilities	648
	270	Telephone	393
	290	Postage	166
	331	Tankcars	(237)
	350/351	Maintenance/Repair	363
	370	Stationery	20
	390/392	Operating Supply	497
	520	Professional Services	648
	170/390/395	Warehouses	9506
		Noxane Pumps	<u>1321</u>
			\$13,975

### IV. SALES FORECAST

	April	May	June	Comparison April 1976
FPD Penta	175,000	200,000	175,000	212,451
Customer Penta	175,000	190,000	175,000	264,973
WTC Products	<u>200,000</u>	<u>200,000</u>	<u>175,000</u>	<u>235,906</u>
	550,000	590,000	525,000	713,330*

\*April 1976 was the month prior to announced penta price increase.

### V. ASSISTANCE REQUIREMENTS

Same as February report.

TOLS004968

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# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### VI. GENERAL COMMENTS

By April 4 or 5 WTC products will be moved from Conley to Kimbro Warehouse in Atlanta. Kimbro has already made some shipments for WTC from stock arriving from St. Louis; transition working smoothly.

Efforts continuing to remain Jeld-Wen's supplier at Flagstaff. Now awaiting sample arrival of one last mineral spirits source for evaluation and costing prior to discussion with Rinchem.

Expect to produce 200 drums Timbertreat 625 in lower Ontario beginning about May 2. If Pittsburgh contacts with Washington know of any reason to hold up, we should be advised by April 11 to stop raw material movement.

### VII. TRAVEL AND MEETINGS

#### MARCH

10 and 11 - Lower Ontario talking to Prospective Timbertreat 625 Blenders

9th - H. P. Struessel - Kansas City - EPA Region VII TOSCA Conference

31st. H. P. Struessel - Chase Hotel, St. Louis - DOT Seminar

#### APRIL

No plans at this writing unless another Ontario trip needed before production.

R. F. Simmons

RFS/pa

TOLS004969

BZTO104(e)041790

# KOPPERS

## Interoffice Correspondence

cc: T. A. Beatty  
F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. R. Taylorson

To John D. Hite  
Location K-1001  
Subject Monthly Report April 1977  
  
Wood Treating Chemicals Dept.

From R. F. Simmons  
Location St. Louis, Mo.  
Date April 26, 1977

### I. SHIPMENTS APRIL ACCOUNTING MONTH

#### (1) Camden, New Jersey Warehouse

Woodtax Preprime Conc.	2 X 55 Gal.
Woodtax Preprime RTU	1 X 55 Gal.
Woodtax 140 RTU	11 X 55 Gal.
Woodtax S Conc.	10 X 55 Gal.
Penta Wood Pres. Conc.	14 X 55 Gal.
Penta Stain #509	1 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Super Noxtane	20 X 50 Lbs.
Dowicide GST Beads	55 X 100 Lbs.
Liquid Noxtane SSI	10 X 55 Gals.
Timbertreat 625 Conc.	1 X 55 Gals.
Green End Spray 400	1 X 55 Gals.
Lumbrella 15 Redwood	1 X 53 Gals.
Lumbrella 33 Redwood S	189 X 3 Gals.
Lumbrella 33 Redwood S	4 X 55 Gals.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	4 X 55 Gals.
Timbertreat 625 Conc.	5 X 55 Gals.
Green End Spray 400	7 X 55 Gals.
Lumbrella 33 Redwood S	12 X 55 Gals.
Lumbrella 33 Yellow S	27 X 3 Gals.
Lumbrella 33 Clear	6 X 55 Gals.

TOLS004970

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	4 X 345 Gals.
Liquid Noxtane SSI	26 X 55 Gals.
Liquid Azide 200	10 X 55 Gals.
Red End Sealer	5 X 55 Gals.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	8021 Gals. Bulk
-----------------	-----------------

### (6) Portland, Oregon Blender

Woodtox 140 RTU	7402 Gals. Bulk
Woodtox Preprime RTU	2022 Gals. Bulk
Woodtox 140 RTU	20 X 55 Gals.
Redy Coat Penta RTU	20 X 55 Gals.
Petroset II	6 @ 460 Lbs.
LST Co-Solvent II	20 X 395 Lbs.

### (7) Sauget, Illinois Blender

Penta Wood Pres. Conc.	8404 Gals. Bulk
------------------------	-----------------

### (8) Phoenix, Arizona Blender

Woodtox 140 T RTU	6999 Gal. Bulk
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### (9) St. Louis, Missouri Plant

Woodtox Preprime RTU	51606 Gals. Bulk
Woodtox RTU	4510 Gals. Bulk
Woodtox 140 RTU	10729 Gals. Bulk
Woodtox Preprime Conc.	7940 Gals. Bulk
Woodtox 152 RTU	5599 Gals. Bulk
Penta Wood Pres. Conc.	4379 Gals. Bulk

TOLS004971

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Woodtox Preprime Conc.	2 X 55 Gals.
Woodtox Preprime RTU	6 X 55 Gals.
Woodtox 140 RTU	5 X 55 Gals.
Woodtox RTU	3 X 5 Gals.
Woodtox 152 RTU	6 X 55 Gals.
Penta Wood Pres. Conc.	23 X 55 Gals.
Penta Wood Pres. Conc.	7 X 5 Gals.
Penta Wood Pres. RTU D	12 X 55 Gals.
Penta Wood Pres. RTU	8 X 55 Gals.
Penta Wood Pres. RTU	1 X 5 Gals.
Wolman Pre Stain RTU	4 X 55 Gals.
Polelife TF	10 X 50 Lbs.
Woodtreat AA	30 X 40 Lbs.
Super Noxtane	122 X 50 Lbs.
Dowicide GST Beads	1 X 100 Lbs.
Liquid Noxtane SSI	6 X 55 Gals.
Liquid Noxtane I	4 X 55 Gals.
Timbertreat 625 Conc.	4 X 55 Gals.
KLB Beam Sealer	14 X 55 Gals.
Wood Seal Wax	3 X 426 Lbs.
Green End Spray 400	3 X 5 Gals.
Red End Sealer	1 X 55 Gals.
Clear End Sealer	1 X 55 Gals.
Clear End Sealer	7 X 5 Gals.
WTC #71	3 X 515 Lbs.
Anstrik Blue Conc.	1 X 5 Gals.
Lumbrella 33 Yellow H	108 X 3 Gals.
Lumbrella 15 Redwood	10 X 53 Gals.
Penta Stain Conc.	20 X 55 Gals.
Penta Stain #502	1 X 5 Gals.
Penta Stain #506	1 X 5 Gals.
Penta Stain #508	1 X 5 Gals.
Penta Stain #509	4 X 55 Gals.

TOLS004972

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### Penta Shipments (Lbs.) April Calendar Month

	1977	1976	1975
FPD Plants	315,517	490,680	529,764
Customers	370,612*	900,931	317,464
WTC	32,200	59,900	62,354
Total	718,329	1,451,511	909,582

\*Includes block and bulk loads subject to minor weight changes due to unknown shipping weights.

### Invoicing (\$) April Accounting Month

	1977	1976	1975
FPD Plants Penta	200,494	212,451	149,710
Customers Penta	161,401	264,973	97,870
WTC Products	225,160	235,906	184,462
	587,055	713,330	432,042

(Remember April 1976 high due to announced May 1 penta price increase.)

### II. Raw Materials

Penta - No problems nor complaints this month, just need more orders.

Penta Conc. from Monsanto - We finally have our first truckload in St. Louis stock this month, so the supply vs. demand situation is improving, even if slowly.

Solvents - Supply adequate, pricing stabilizing and suppliers worrying more about sales; expect some slight localized TVA pricing soon on LEP mineral spirits.

Dow-Badische is becoming more interested in supplying bottom materials as penta solvents again. They are offering to make bottom stream blends and working on lowering costs. Some materials show promise if D-B gets the price right.

TOLS004973

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

Tetra-Penta - Reichhold has made 40,000 Lbs. of material which will give us another month's stock of LN-SSI on the West Coast. St. Louis stock of LN-SSI is sufficient for a month or more, but we have no more tetra-penta to make product and sales is wanting LN-1 (which also uses tetra-penta); the LN-1 is more price competitive than LN-SSI.

As of this writing, we do not know if Reichhold can and will make more tetra-penta, or if we are still out on the limb. Reichhold personnel are out of contact for two more days.

Our alternate scheme of using Reichhold tetra and Dowicide EC-7 penta makes a quality Liquid Noxtane product, however Dow has been, to date, unable to fill even a one truckload order for EC-7 since April 7; promises now are "maybe early May". Dow's plant has been down for a month this time, and seems very unreliable.

### III. INVENTORY & EXPENSES

March closing inventory	\$665,159
April Purchases	
Raw Materials	103,899
Containers	3,352
Resale Stock	9,432
Total	116,683
April Raw Material Conversion to FG	(121,575)
April (Estimated) Cost of Goods Sold	181,580
April (Estimated) Closing Inventory	600,262
May (Estimated) Closing Inventory	650,000
June (Estimated) Closing Inventory	670,000

TOLS004974

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### April Plant Expenses

Detail #130 Safety	216
170 Rent	25
190 Office Expense	383
270 Telephone	489
290 Postage	13
331 Tankcars (Prior Mo. credits to cancel)	757
350 Repair & Maint. (Incl. 1296 for AFE)	1650
381 Fuel & Power	248
390 Operating Supply	571
392	
395 Freight	7
520 Prof. Svcs. (Traffic & Lab)	625
170/390/395 Warehouses	<u>2509</u>
Total Operating Expenses	<u>5440</u>

Noxtane pumps 1264

### IV. Sales Forecast

	May	June	July	May 1976 Comparison
FPD Penta	168,000	125,000	175,000	139,786
Customer Penta	200,000	150,000	150,000	148,322
WTC Products	<u>240,000</u>	<u>220,000</u>	<u>220,000</u>	<u>275,992</u>
	<u>608,000</u>	<u>495,000</u>	<u>545,000</u>	<u>564,100</u>

### May Forecast

A good month is expected in Woodtox products from St. Louis, Liquid Noxtane on the West Coast and Lumbrells in the Carolinas. FPD penta sales are slipping; May is only forecast as good as shown because we expect a bulk hopper car to Oroville, California. Otherwise, many FPD plants are slow on penta. Customer penta sales are to be had, and our forecast is based on getting someone hustling.

TOLS004975

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

### V. ASSISTANE REQUIREMENTS

No new ones, repeat needs of last few months.

### VI.GENERAL COMMENTS

WTC stock was moved from Conley to Kimbro Warehouse in Atlanta as reported. Enough labeling was apparently destroyed by outside weathering at Conley that we have 5 or 6 drums now mislabeled at Kimbro when new labeling was applied upon transfer. This obviously can be serious and we are taking every precaution to make sure shipments are made correctly until the stock can be thoroughly checked.

Another effort is to be made at Jeld-Wen at Flagstaff utilizing Rinchem/Phoenix as blender of Woodtox Preprime RTU from Conc.; costing distributed today.

Canadian Timbertreat 625 production still set for May - moved back to begin 9th by formulator. Materials bought and mostly enroute.

EPA consumer safety inspector Marvin Frye from Region VII spent the better part of April 6 & 7 inspecting our plant and taking product samples; no problems discussed and expect no problems from the sampling.

Also inspected this month by Kemper Insurance boiler inspector and sewer district to sample effluent. Boiler inspection OK and there was no effluent to sample, as usual.

TOLS004976

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### VII. Travel & Meetings

H. Struessel gave deposition 4/14 at Alton, IL. In the case of Redferns vs. Garella Pest Control, Crown Chemical, Monsanto & Koppers. Templeton Smith informed.

April - none.

May - 1 week London, Ontario blender  
2-1/2 days vacation

R. F. Simmons

TOLS004977

cc: F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
J. D. Hite  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. F. Taylerson

# KOPPERS

## Interoffice Correspondence

To T. A. Beatty

Location K-1001

Subject Monthly Report May 1977

From R. F. Simmons

Location St. Louis, Mo.

Date June 3, 1977

Wood Treating Chemicals Dept.

### I. Shipments May Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox 140 Conc.	6 X 55 Gal.
Woodtox Preprime RTU	10 X 55 Gal.
Penta Wood Pres. Conc.	18 X 55 Gal.
Penta Stain #509	2 X 55 Gal.
Super Noxtane	40 X 50 Lbs.

#### (2) Enfield, North Carolina Warehouse

Super Noxtane	40 X 50 Lbs.
Dowicide GST Beads	25 X 100 Lbs.
KLB Beam Sealer	8 X 55 Gals.
Green End Spray 400	5 X 55 Gals.
Liquid Noxtane SSI	19 X 55 Gals.
Lumbrella 15 Redwood	14 X 53 Gals.
Lumbrella 25 Brown	10 X 55 Gals.
Lumbrella 33 Redwood S	162 X 3 Gals.
Lumbrella 33 Redwood S	15 X 55 Gals.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	9 X 55 Gal.
Timbertreat 625 Conc.	1 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Lumbrella 15 Clear	1 X 55 Gal.
Lumbrella 15 Yellow	3 X 53 Gal.
Lumbrella 33 Clear	6 X 55 Gal.
Lumbrella 33 Yellow S	27 X 3 Gal.
Lumbrella 33 Redwood H	34 X 3 Gal.
Lumbrella 33 Redwood S	27 X 3 Gal.
Lumbrella 33 Redwood S	13 X 55 Gal.

TOLS004978

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SST	10 X 345 Gal.
Liquid Noxtane SSI	133 X 55 Gal.
Liquid Azide 200	12 X 55 Gal.
Clear End Sealer	12 X 55 Gal.
Orange End Sealer	5 X 55 Gal.
Red End Sealer	4 X 55 Gal.
Blue End Sealer	3 X 55 Gal.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	6180 Gal. Bulk
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### (6) Portland, Oregon Blender

Woodtox Preprime RTU	14734 Gal. Bulk
Woodtox Preprime RTU	82 X 55 Gal.
Woodtox 140 RTU	3774 Gal. Bulk
Timbertox 40 Conc.	5776 Gal. Bulk
Redy Coat Penta Conc.	12 X 55 Gal.
Redy Coat Penta RTU	20 X 55 Gal.

### (7) Sauget, Illinois Blender

Penta Wood Pres Conc.	0 Gal.
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### (8) Phoenix, Arizona Blender

Woodtox 140T Conc.	2 X 55 Gal.
--------------------	-------------

TOLS004979

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### (9) St. Louis, Missouri Plant

Woodtax Preprime RTU	32667 Gal. Bulk
Woodtax Preprime RTU	20 X 55 Gal.
Woodtax RTU	4987 Gal. Bulk
Woodtax RTU	229 X 5 Gal.
Woodtax Preprime Conc.	3982 Gal. Bulk
Woodtax Preprime Conc.	8 X 55 Gal.
Woodtax 140 Conc.	28 X 55 Gal.
Woodtax 140 RTU	1923 Gal. Bulk
Woodtax 140 RTU	1 X 55 Gal.
Woodtax 152 RTU	4 X 55 Gal.
Woodtax 152 RTU	12 X 5 Gal.
WR 340 Conc.	15 X 400 Lbs.
Penta Wood Pres. Conc.	4385 Gal. Bulk
Penta Wood Pres. Conc.	42 X 55 Gal.
Penta Wood Pres. Conc.	18 X 5 Gal.
Penta Wood Pres. RTU	6 X 55 Gal.
Poletox	20 X 380 Lbs.
Poletox	159 X 60 Lbs.
Woodtreat AA	14 X 40 Lbs.
Woodtreat AA Tubes	99 Each
Woodtreat AA Guns	2 Each
Woodtreat AA Tags & Nails	1 Lot
Polycraft Paper Brown	1 Roll
Super Noxtane	790 X 50 Lbs.
Dowicide GST Beads	1 X 100 Lbs.
Pole Color Coating Munsell Grey	1 X 55 Gal.
Anstrik Blue Conc.	1 X 5 Gal.
Holman Pre-Stain	2 X 55 Gal.
KLB Beam Sealer	1 X 55 Gal.
Clear End Sealer	3 X 55 Gal.
Clear End Sealer	5 X 5 Gal.

TOLS004980

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-4-

Liquid Noxtane SSI	20 X 55 Gal.
Timbertreat 625 Conc.	13 X 55 Gal.
WTC #71	4 X 515 Lbs.
Lumbrella 25 Cherry Tone	60 X 55 Gal.
Penta Stain #502	1 X 55 Gal.
Penta Stain #502	21 X 5 Gal.
Penta Stain #503	1 X 5 Gal.
Penta Stain #506	1 X 55 Gal.
Penta Stain #506	1 X 5 Gal.
Penta Stain #508	1 X 55 Gal.
Penta Stain #509	5 X 55 Gal.

### Penta Shipments (Lbs.) May Calendar Month from Monsanto

	1977	1976	1975
FPD Plants	<u>426,173</u>	<u>397,447</u>	<u>117,951</u>
Customers	<u>403,249</u>	<u>208,460</u>	<u>349,271</u>
WTC	<u>146,850</u>	<u>35,000</u>	<u>104,292</u>
	<u>976,272</u>	<u>640,907</u>	<u>571,514</u>

In addition: From Reichhold - 50740 to Oroville  
 From Vulcan - 41160 to Montgomery  
 From Dow - 54000 to WTC- St. Louis & Newark

### Invoicing (\$) May Accounting Month

	1977	1976	1975
FPD Plants Penta	<u>133,576</u>	<u>139,786</u>	<u>174,497</u>
Customers Penta	<u>181,774</u>	<u>148,322</u>	<u>121,693</u>
WTC Products	<u>288,172</u>	<u>275,992</u>	<u>277,439</u>
	<u>603,522</u>	<u>564,100</u>	<u>573,629</u>

274,000 Sales  
 75,000 Profit  
 27.3 %

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### II. Raw Materials

Penta - A book could be written on May problems, briefly:

Bulk - With a Monsanto safety audit came an overnight decision to stop breaking bags over a conveyor to load bulk. The plant conveyor system grinds prills into dust, which in months of warmer temperatures and high humidity compact into lumps causing loading/unloading problems and also clogging bulk silos. Thus, over one week-end --No way of handling bulk penta. Hopefully (?) in a week a Sprout-Waldron conveying system will be installed at the plant which it is thought will not grind prills into dust.

Prills - Numerous plant shutdowns have occurred to patch prill tower holes and surrounding roof, so that inventory is exhausted and we are living on a day-to-day basis to make shipments at present.

Blocks - While we have not run out of blocks completely yet, one load substituted 1000 Lb. blocks for 2000 Lb. ones and inventory is dangerously low.

Penta Conc from Monsanto - A load received May 26 here contained sodium sulphate or sulphite crystals or formed in our system upon receipt, indicating excess free sodium from caustic and sulfur from sulfuric acid was used in production. We are handling for rectification, but this is just another evidence of inefficient penta plant operations.

Solvents - All taking another price increase by July 1; no supply problems.

Tetra-Penta - Arsenault has advised that Vulcan will not make the product, so we have no choice but use tetra from Reichhold and EC-7 from Dow to make all Liquid Noxtnes. Dow remains most unreliable for material; advance stocking will be required.

TOLS004982

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### III. Inventory & Expenses

April closing inventory (computer)	650,002
May purchases	
Raw Material	262,833
Containers	11,451
Resale Stock	2,077
	276,361
May raw material conversion to Finished Goods	168,365
May (estimated) cost of goods sold	211,250
May (estimated) closing inventory	546,748
June estimated closing inventory	625,000
July estimated closing inventory	650,000
May Plant expenses	
Detail #130 Safety	211
170 Rent	25
190 Office Expense (utilities)	2,337
270 Telephone	486
331 Tank Cars	(78)
351/350 Repairs & Maint.	2,848
370 Printing & Supply	250
381 Fuel & Power	297
390/392 Operating Supply	317
520 Prof. Svcs. (Traffic & Lab.)	625
550 Subscriptions	32
170/390/395 Warehouses	7,121
Total Operating Expenses	14,470
Noxtane pumps	793

TOLS004983

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

### IV. Sales Forecast

	June	July	Aug.	June 1976 Comparison
FPD Penta	170,000	200,000	175,000	134,006
Customer Penta	190,000	175,000	175,000	85,371
WTC Products	220,000	220,000	200,000	308,687
	580,000	595,000	550,000	527,687

### V. Assistance Requirements

Nothing new.

### VI. General Comments

1. A small quantity of material remains at Rinchem at Phoenix. There is no word from Jeld-Wen. We need to get answer, if any, and stock Rinchem or put this situation to bed.
2. Canadian Timbertreat 625 production complete May 30. We are awaiting blender establishment registration number and border entry permits to move.
3. Received contaminated borax from U. S. Borax this month; handling for a claim.
4. Received credit memo from Reichhold for total plant expenses for the tetra-penta screw up at Jones-Hamilton.
5. Randy Collins of the Productivity Improvement Team spent May 23 & 24 with us.

### VII. Travel & Meetings

May 19-20-25-26-27 Timbertreat 625 production, London, Ontario  
May 11-12 2 days vacation.  
June - Several St. Louis plant labor negotiating meetings.

R. F. Simmons

TOLS004984

# KOPPERS

## Interoffice Correspondence

To T. A. Beatty  
Location K-1001  
Subject Monthly Report July 1977

cc: F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
J. D. Hite  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
D. F. Taylerson  
~~G. A. BEAULIEU~~  
From R. F. Simmons  
Location St. Louis, Mo.  
Date August 1, 1977

Wood Treating Chemicals Dept.

### I. Shipments July Accounting Month

#### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	10 X 55 Gal.
Woodtox 140 Conc.	14 X 55 Gal.
Woodtox 140 RTU	10 X 55 Gal.
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox Preprime RTU	4 X 55 Gal.
Woodtox RTU	1 X 55 Gal.
Woodtox RTU	6 X 5 Gal.
Super Noxtane	10 X 50 Lbs.

#### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Yellow	4 X 55 Gal.
Lumbrella 15 Redwood	3 X 55 Gal.
Lumbrella 33 Redwood S	15 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 33 Redwood H	43 X 3 Gal.
Liquid Noxtane SST	9 X 55 Gal.
Timbertreat 625	4 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Super Noxtane	31 X 50 Lbs.
Dowicide GST Beads	15 X 100 Lbs.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	4 X 55 Gal.
Lumbrella 33 Redwood S	8 X 55 Gal.
Lumbrella 15 Yellow	3 X 55 Gal.
Lumbrella 33 Yellow S	6 X 3 Gal.
Liquid Noxtane SST	5 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Dowicide GST Beads	5 X 100 Lbs.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	5 X 345 Gal.
Liquid Noxtane SSI	89 X 55 Gal.
Liquid Azide 200	7 X 55 Gal.
Red End Sealer	12 X 55 Gal.
Orange End Sealer	4 X 55 Gal.
Clear End Sealer	2 X 55 Gal.
Clear End Sealer	1 X 345 Gal.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	5929 Gal. Bulk
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### (6) Portland, Oregon Blender

Woodtox Preprime T-RTU	8075 Gal. Bulk
Woodtox Preprime T-RTU	80 X 55 Gal.
Woodtox 140 T-Conc.	50 X 55 Gal.
Redy Coat Penta RTU	39 X 55 Gal.
Redy Coat Penta Conc.	4 X 55 Gal.
Timbertox 40 Conc.	3992 Gal. Bulk
WR 340 Conc.	12 X 408 Lbs.
Petroset II	2 X 460 Lbs.

### (7) Sauget, Illinois Blender

Penta Wood Pres. Conc.	0
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### (8) Phoenix, Arizona Blender

Woodtox 140 T-RTU	0
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TOLS004986

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-3-

### (9) St. Louis, Missouri Plant

Woodtax Preprime RTU	51532 Gal. Bulk
Woodtax Preprime RTU	5 X 55 Gal.
Woodtax Pre-prime Conc.	5 X 55 Gal.
Woodtax Preprime Conc.	3 X 5 Gal.
Woodtax 140 RTU	3951 Gal. Bulk
Woodtax 140 RTU	6 X 55 Gal.
Woodtax 140 Conc.	15 X 55 Gal.
Woodtax RTU	4933 Gal. Bulk
Woodtax RTU	15 X 55 Gal.
Woodtax RTU	298 X 5 Gal.
Woodtax 152 RTU	1 X 5 Gal.
WR 340 Conc.	50 X 400 Lbs.
Monsanto Penta Wood Pres. Conc.	4441 Gal. Bulk
Penta Wood Pres. Conc.	33 X 55 Gal.
Penta Wood Pres. Conc.	19 X 5 Gal.
Penta Wood Pres. RTU	6 X 55 Gal.
Liquid Noxtane I	4 X 55 Gal.
Liquid Noxtane SSI	56 X 55 Gal.
Timbertreat 625	13 X 55 Gal.
Timbertreat 625	11 X 5 Gal.
Clear End Sealer	2 X 55 Gal.
Red End Sealer	2 X 5 Gal.
KIB Beam Sealer	15 X 55 Gal.
Wood Seal Wax	1 X 40 Lbs.
Holman Pre-Stain Grey	1 X 55 Gal.
WTC #71	8 X 515 Lbs.
Super Noxtane	90 X 50 Lb.
Lumbrella 33 Yellow S	27 X 3 Gal.
Penta Stain #506	4 X 5 Gal.
Penta Stain #509	4 X 5 Gal.
Polykraft Paper	15 Rolls
Penta Check	2 Pts.

TOLS004987

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### Penta Shipments July Calendar Month - Lbs.

(Monsanto)	1977	1976	1975
FPD Plants	<u>365,520*</u>	<u>611,089</u>	<u>438,325</u>
Customers	<u>360,787</u>	<u>315,796</u>	<u>435,855</u>
WTC	<u>91,900</u>	<u>26,600</u>	<u>83,500</u>
	<u>818,207*</u>	<u>953,485</u>	<u>957,680</u>

(\* less approximately 75,000# credit due for bad material -Oroville hopper car shipment.)

(Vulcan)	
FPD Plants	44,700

### Invoicing (\$) July Accounting Month

	1977	1976	1975
FPD Penta	<u>125,890</u>	<u>196,855</u>	<u>106,233</u>
Customer Penta	<u>194,255</u>	<u>186,740</u>	<u>111,606</u>
WTC Products	<u>222,525</u>	<u>241,003</u>	<u>236,138</u>
Total	<u>543,990</u>	<u>624,598</u>	<u>453,977</u>

### II. Raw Materials

Penta - Operating problems continue to limit production. Inventory, on a day to day basis remains sold out and orders have been and are being juggled constantly to keep our own plants, as well as customers, from running out of stock. Early in July, product dustiness caused load line plugging, blew lines apart and deluged the plant in penta; this occurred during the period when the bulk hopper car was loading for Oroville. The car finally shipped ten days late and 50,000 lbs. short and upon receipt and attempt to unload, only about 25,000 lbs. could be unloaded due to dustiness and compaction; the car is returning to Monsanto now and we are pursuing for credit for return of the bad product. Atlantic Creosoting had to order elsewhere for a load during the period of blown lines; Colfax's order shipped eight days later than scheduled, but without the customer running out.

TOLS004988

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

Turning to blocks, loads for Florence, Charleston and Denver were all rescheduled during the latter two weeks of July due to short supply. Currently, we have just discussed on the telephone with you the 2000 Lb. block situation and the delayed Escambia order; we believe that if the load is not ready for pickup as Escambia ordered, we think that Escambia's business in total is lost.

Noting shipments from Monsanto in July, with the Oroville return deducted, will be less than 750,000 pounds and the plant having little to no inventory on hand, August is anticipated as another month of trouble. We have already ordered 100,000Lbs. for August from Reichhold for Oroville, anticipate a Vulcan load for Montgomery and still expect to be short of our needs.

Solvents - Oxo bottoms have been put on 80% allocation based on the first half of 1977 receipts. This is due to increased efficiency in producing prime product. The allocation may affect us late in the year unless Oxo substitutes are found.

KB-3 is currently in short supply. Our inventory is adequate short range only.

Mineral Spirits - Rule 66 LEP spirits are becoming tight in supply; no problems yet with us. Triangle Refinery had a fire and will be out at least a month.

Chemicals - Paraffin wax is extremely short and we are having to purchase it at increasing costs in order to maintain stock. Boric acid is allocated in St. Louis.

TOLS004989

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

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### III. Inventory & Expenses

June closing inventory (computer)	662,808	
June Physical	675,176	596
July Purchases		
Raw Materials	120,147	
Containers	16,927	
Resale stock	34,768	
	<u>171,842</u>	

July raw material converted to finished product	128,291	
July (estimated) cost of goods sold	166,894	
July (estimated) closing inventory	680,124	
August (estimated) closing inventory	700,000	
September (estimated) closing inventory	725,000	
October (estimated) closing inventory	700,000	

#### July Plant Expenses

##### Detail

130 Safety	309	
170 Rent	25	
190 Office expenses & svcs	359	
270 Telephone	426	
290 Postage	113	
331 Tankcars	(722)	
350/351 Repairs & Maint.	91	
370 Printing & Supplies	233	
381 Fuel & Power	323	
390/392 Operating Supply(1400 order ack./loading forms)	2322	
520 Prof. Svcs. (Traffic & Lab)	640	
550 Subscriptions	18	
170/390/395 Warehouses	7458	
	<u>11595</u>	
Noxane pumps	0	

TOLS004990

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### IV. Sales Forecast



	August	September	October	Aug. 76 Comparison
FPD Penta	190,000	170,000	200,000	171,533
Customer Penta	160,000	150,000	200,000	105,533
WTC Products	220,000	210,000	220,000	293,951
	570,000	530,000	620,000	571,017

### V. Assistance Requirements

1. Pray nightly for Monsanto & Penta -- while cursing them daily to do something.
2. Co-solvent search needs reinforced in light of shortages developing.
3. No change in Rinchem inventory - let's close this out.
4. Tote bin location west coast not complete yet so bin demurrage can be started.
5. Several west coast leaking drum incidents awaiting advise of sales dept. to secure settlement with drum suppliers.

### VI General Comments

St. Louis plant union agreed to 6% increase, June 30.

June 20 physical inventory tentatively appears to have a \$13,000 pickup.

Cost standards are essentially all revised & current.

### VII Travel & Meetings

July 7 - Valparaiso

July 15 - Atlanta

July 26 - Jan Redd - Jerry Dougherty at St. Louis

July 29 - Aetna Insurance Inspection.

August - Plans incomplete, but July deferred vacation 2/3 days

R. F. Simmons

TOLS004991

# KOPPERS

## Interoffice Correspondence

J. R. Brunetti  
 G. J. Gilf  
 T. C. Hayeson  
 J. D. Hiltz  
 F. M. Klasnick  
 J. M. Montgomery  
 J. D. Palmer  
 D. F. Taylerson

To T. A. Beatty

From R. F. Simmons

Location K-1001

Location St. Louis, MO.

Subject Monthly Report June 1977

Date June 29, 1977

Wood Treating Chemicals Dept.

### i. Shipments June Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	4 X 55 Gal.
Woodtox Preprime RTU	1 X 55 Gal.
Woodtox 140 RTU	6 X 55 Gal.
Woodtox RTU	3 X 5 Gal.
Penta Wood Pres. Conc.	11 X 55 Gal.
Super Noxtane	30 X 50 Lbs.

#### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 25 Brown	5 X 55 Gal.
Lumbrella 33 Redwood S	5 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 33 Redwood H	54 X 3 Gal.
Liquid Noxtane SSI	16 X 55 Gal.
Timbertreat 625 Conc.	2 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Dowicide GST Beads	22 X 100 Lbs.
Super Noxtane	46 X 50 Lbs.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Redwood S	5 X 55 Gal.
Lumbrella 33 Clear	5 X 55 Gal.
Lumbrella 33 Yellow S	4 X 55 Gal.
Lumbrella 33 Yellow S	6 X 3 Gal.
Lumbrella 15 Yellow	1 X 55 Gal.
Liquid Noxtane SSI	17 X 55 Gal.
Liquid Noxtane I	7 X 55 Gal.
Green End Spray 400	5 X 55 Gal.
Dowicide GST Beads	8 X 100 Lbs.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### (4) Newark, California Warehouse

Liquid Noxtane SSI	18 X 55 Gal.
Liquid Noxtane SSI	5 X 345 Gal.
Liquid Azide 200	4 X 55 Gal.
Res End Sealer	3 X 55 Gal.

### (5) Cotton Valley, Louisiana

Woodtox 140 RTU	2290 Gal. Bulk
-----------------	----------------

### (6) Portland, Oregon Blender

Redy Coat Penta Conc.	40 X 55 Gal.
Woodtox Preprime RTU-T	17034 Gal. Bulk
Woodtox Preprime RTU-T	10 X 55 Gal.
Woodtox 140 Conc-T	40 x 55 Gal.
Woodtox 140 RTU-T	8350 Gal. Bulk
Woodtox 140 RTU-T	12 X 55 Gal.
Timbertex 40 Conc.	1 X 55 Gal.
Petroset 11	9 X 460 lbs.
WR 340 Conc.	6 X 405 lbs.

### (7) Saugeet, Illinois Blender

Penta Wood Pres. Conc.	0
------------------------	---

### (8) Phoenix, Arizona Blender

Woodtox 140	0
-------------	---

TOLS004993

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_ From \_\_\_\_\_  
Location \_\_\_\_\_ Date \_\_\_\_\_  
Project \_\_\_\_\_ Date \_\_\_\_\_

-3-

### 19) St. Louis, Missouri Plant

Woodtex Preprime Conc.	3971 Gal. Bulk
Woodtex Preprime RTU	29561 Gal. Bulk
Woodtex 140 RTU	3775 Gal. Bulk
Woodtex RTU	4364 Gal. Bulk
Penta Wood Pres. Conc.	1550 Gal. Bulk
Woodtex Preprime Conc.	5 X 55 Gal.
Woodtex Preprime RTU	8 X 55 Gal.
Woodtex Preprime RTU	10 X 5 Gal.
Woodtex S Conc.	10 X 55 Gal.
Penta Wood Pres. Conc.	21 X 55 Gal.
Penta Wood Pres. Conc.	10 X 5 Gal.
Penta Wood Pres. RTU	7 X 55 Gal.
Poletox	45 X 360 Lbs.
Poletox	60 X 60 Lbs.
Tritox	10 X 60 Lbs.
Woodtreat AA	4 X 40 Lbs.
Woodtreat AA	90 Each
Liquid Noxtane SS1	6 X 55 Gal.
Timbertreat 625	3 X 55 Gal.
Timbertreat 625	10 X 5 Gal.
Clear End Sealer	1 X 55 Gal.
Wood Seal Wax	1 X 40 Lbs.
KLB Beam Sealer	8 X 55 Gal.
Pre-stain RTU	2 X 55 Gal.
Pre-stain RTU Grey	1 X 55 Gal.
WTC #71	5 X 515 Lbs.
WTC #74	1 Y 460 Lbs.
Petroset II	1 X 460 Lbs.
Lumbrella 33 Yellow S	891 X 3 Gals.
Super Noxtane	110 X 50 Lbs.
Penta Stain #503	1 X 5 Gal.
Penta Stain #506	3 X 5 Gal.
Penta Stain #508	4 X 5 Gal.
Penta Stain #509	2 X 55 Gal.
Paper Brown/Black	4 Rolls Ea.

TOLS004994

2025 RELEASE UNDER E.O. 14176

BZTO104(e)041815

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Penta Shipments (Lbs.) June Calendar Month (from Monsanto)

	1977	1976	1975
FPD Plants	498,857	238,050	644,368
Customers	480,422	219,820	211,019
WTC	-1,200	148,100	82,000
	978,079	605,970	937,387

In addition, June 1977 Outside purchases:

From Vulcan - 40,780# to Montgomery  
From Reichhold - 50,360# to Oroville  
From Dow - 40,000 to St. Louis

It is perhaps coincidental, but June 1976, as well as 1977, Monsanto has had a lot of down time due to various operational problems.

### Invoicing (\$) June Accounting Month

	1977	1976	1975
FPR Penta	281,979	134,006	259,751
Customers Penta	166,834	85,371	102,928
WTC Products	219,720	308,310	358,896
	668,533	527,687	721,575

### II Raw Materials

Penta - Various and sundry production problems continue to plague Monsanto's plant and production is barely managing to keep ahead of orders. On the plus side, the Sprout-Waldron pneumatic loader finally did get set and used to load three bulk shipments in June; to date, there have been no handling problems with these loads to our knowledge.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

Solvents - As noted in last months report, general price increases July 1. Mineral spirits increases will average 2¢ per gallon.

Wax - Tight supply due to one producer ceasing production and the remaining three trying to pick up the increased sales. We have a six weeks stock and think our needs will be handled by Shell without problem.

### III Inventory & Expenses

May closing inventory (computer)	686,483
June Purchases	
Raw Materials	144,622
Containers	6,610
Resale Stock	15,437
	156,669
June raw material conversion to FG	171,395
June (estimated) cost of goods sold	159,736
June (estimated) closing inventory	693,416
July (estimated) closing inventory	650,000
August (estimated) closing inventory	650,000
June Plant Expenses	
Detail	
130 Safety	393
170 Rent	25
190 Office Expense & Services	384
270 Telephone	412
290 Postage	55
331 Tankcars	469
351/350 Repairs & Maint.	1317
370 Printing & Supplies	112
381 Fuel & Power	379
390/392 Operating Supply	950
520 Prof. Svcs. (Traffic & Lab)	663
170/390/395 Warehoused	2696
Total Operations Expense	7355
Noxtane Pumps	174

**KOPPERS**

## **Interoffice Correspondence**

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-6-

#### IV Sales Forecast

	<u>July</u>	<u>August</u>	<u>September</u>	<u>July 1976</u> <u>Comparison</u>
FPD Penta	200,000	175,000	200,000	196,855
Customer Penta	175,000	175,000	150,000	186,741
WTC Products	220,000	200,000	200,000	241,003
	<u>595,000</u>	<u>550,000</u>	<u>550,000</u>	<u>624,599</u>

#### **4. Assistance Requirements**

1. Raw material (lithium hydroxide) increase of 7¢ per pound July 1 again causes this comment: we had better be exerting a lot of effort to finding a less expensive formulation for sap stain control.
  2. Co-solvent search should continue.
  3. The Rinchem inventory remains.

## VI. General Comments

FIA Insurance inspection June 6; there will be no new recommendations. L. E. Anderson of Loss Prevention Dept. visited June 28; only a few minor items need attention in the plant.

There was a June 17 meeting with the union to receive their demands for the coming year; another meeting scheduled June 30 prior to expiration July 1.

June 20 physical inventory will be costed by July 7. All products will be updated for cost by July 20.

## VII Travel & Meetings

July 6 - Valparaiso with T. Beatty.  
July - 2/3 days vacation, plans incomplete.

R. F. Simmons

TOLS004997

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
J. D. Hite  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
G. A. Schultz  
D. F. Taylorson

From R. F. Simmons

To T. A. Beatty

Location K-1001

Subject Monthly Report August 1977

Wood Treating Chemicals

Location St. Louis, Mo.

Date September 1, 1977

### I. Shipments August Accounting Month

#### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	10 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	23 X 55 Gal.
Liquid Noxtane I	1 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Super Noxtane	86 X 50 Lbs.
Lumbrella 15 Yellow	5 X 55 Gal.
Lumbrella 15 Redwood	9 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Redwood S	9 X 55 Gal.
Lumbrella 33 Redwood S	27 X 3 Gal.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	6 X 55 Gal.
Lumbrella 33 Redwood S	5 X 55 Gal.
Green End Spray 400	5 X 55 Gal.

#### (4) Newark, California Warehouse

Liquid Noxtane SSL	235 X 55 Gal.
Liquid Noxtane SSL	6 X 345 Gal.
Liquid Azide 200	8 X 55 Gal.
Blue End Sealer	1 X 55 Gal.
Red End Sealer	5 X 55 Gal.
Pallets	10 ea.

TOLS004998

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	12,102 Gal. Bulk
-----------------	------------------

### (6) Portland, Oregon Blender

Woodtox 140 T Conc	3,014 Gal. Bulk
Woodtox Preprime T RTU	7,990 Gal. Bulk
Woodtox 140 T Conc.	70 X 55 Gal.
Woodtox 140 T RTU	26 X 55 Gal.
Redy Coat Penta Conc.	40 X 55 Gal.
Redy Coat Penta RTU	28 X 55 Gal.
Timbertox 40 Conc.	4 X 55 Gal.
WR 340 Conc.	30 X 408 Lbs.
Petrosset LL	4 X 460 Lbs.

### (7) Sauget, Illinois Blender

Penta Wood Pres. Conc.	4,261 Gal. Bulk
------------------------	-----------------

### (8) Phoenix, Arizona Blender

0

### (9) St. Louis, Missouri Plant

Woodtox Preprime RTU	66,939 Gal. Bulk
Woodtox RTU	3,994 Gal. Bulk
Woodtox 140 RTU	2,970 Gal. Bulk
Woodtox 152 RTU	3,935 Gal. Bulk
Penta Wood Pres. Conc.	4,168 Gal. Bulk
Woodtox 140 Conc.	62 X 55 Gal.
Woodtox 140 RTU	13 X 55 Gal.
Woodtox Preprime Conc.	31 X 55 Gal.
Woodtox Preprime RTU	8 X 55 Gal.
Woodtox RTU	219 X 5 Gal.
Woodtox 152 RTU	14 X 5 Gal.

TOLS004999

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Timbertox D-5	3 X 55 Gal.
Penta Wood Pres. Conc.	24 X 55 Gal.
Penta Wood Pres. Conc.	1 X 5 Gal.
Penta Wood Pres. RTU	3 X 55 Gal.
Penta Stain Conc.	20 X 55 Gal.
WR 340 Conc.	54 X 400 Lbs.
Poletox	14,240 Lbs.
Wolman PreStain Redwood	3 X 55 Gal.
Wolman PreStain Cedar	6 X 55 Gal.
Woodtreat AA	2 X 50 Lbs.
Liquid Noxtane SSL	4 X 55 Gal.
Liquid Noxtane I	5 X 55 Gal.
Timbertreat 625 Conc.	2 X 55 Gal.
Timbertreat 625 Conc.	10 X 5 Gal.
WTC #71	1 X 515 Lbs.
WTC #7-11	5 X 40 Lbs.
Pole Color Coating Grey	2 X 55 Gal.
KLB Beam Sealer	22 X 55 Gal.
Clear End Sealer	1 X 55 Gal.
Clear End Sealer	10 X 5 Gal.
Wood Seal Wax	2 X 40 Lbs.
Red End Spray 400	1 X 55 Gal.
Red End Spray 400	5 X 5 Gal.
Lumbrella 33 Yellow S	27 X 3 Gal.
Super Noxtane	174 X 50 Lbs.
Anstrik Blue Conc.	1 X 5 Gal.
Dowicide GST Beads	100 X 100 Lbs.
Penta Stain 502	5 X 55 Gal.
Penta Stain 505	3 X 55 Gal.
Penta Stain 508]	2 X 55 Gal.
Penta Stain 509	6 X 55 Gal.

TOLS005000

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Date \_\_\_\_\_

-4-

Penta Stain 501	I X 5 Gal.
Penta Stain 502	II X 5 Gal.
Penta Stain 503	I X 5 Gal.
Penta Stain 504	I X 5 Gal.
Penta Stain 506	20 X 5 Gal.
Penta Stain 507	7 X 5 Gal.
Penta Stain 508	9 X 5 Gal.
Penta Check	6 Qts & 1 Pt.
Penta Tration Dye	1 Lb.

### Penta Shipments August Calendar Month Lbs.

(Monsanto)	1977	1976	1975
FPD Plants	478,445*	622,256	608,610
Customers	612,205*	421,696	240,425
WTC	112,450	203,726	67,817
	1,203,100*	1,248,078	916,832

Vulcan to FPD 40,500  
Reichhold to FPD 98,760  
Dow to WTC 40,000

\* Subject to slight changes due to unknown bulk truck weights.

### Invoicing (\$) August Accounting Month

	1977	1976	1975
FPD Penta	258,721	171,533	231,950
Customer Penta	236,122	105,533	169,226
WTC Products	298,134	293,951	191,557
	792,977	571,017	592,733

TOLS005001

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### II Raw Materials

Penta - Monsanto still not able to build inventory. Plant has run most of August, 6 days per week, but due to several off-spec. batches which are not salable and low plant efficiency, we continue to keep them "sold out". At least there have been no lost customer orders in August. It is our understanding that Monsanto is making their last load of 2000 Lb. blocks now; Sales should be preparing our customers for this eventuality. Bulk penta shipments problems continue in spite of the Sprout-Waldron conveyor. I am not convinced that every load can be done with the Sprout-Waldron equipment with no problems, due to product variability and operating quirks of the S-W conveyor.

Solvents - In addition to the 80% allocation of Oxo Bottoms, Monsanto increased the price .02 per pound. Mineral spirits are again slated for .03 to .07 per gallon Increases October 1.

### III Inventory & Expenses

(July computer figures unavailable as of this writing, so this month's figures are all educated guesses.)

July estimated closing inventory	601,000
August purchases	162,358
Raw Material	125,204
Finished Goods	28,350
Containers	8,804
August Raw Material converted to Finished Goods	152,528
August cost of goods sold	226,584
August closing inventory	536,774
September closing inventory	600,000
October closing inventory	650,000
November closing inventory	650,000
December closing inventory	600,000

TOLS005002

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### August Plant Expenses

Detail 130 Safety	595
170 Rent	25
190 Office Expenses & Svcs	290
270 Telephone	366
331 Tank Cars	(457)
350/351 Repairs/Maint.	745
370 Printing & Supplies	13
381 Fuel & Power	551
390/392 Operating Supplies	257
520 Prof. Svcs. (Traffic & Lab)	573
170/390/395 Warehouses	7343
	10301
	1147

### Noxane Pumps

### IV Sales Forecast (\$)

	Sept.	Oct.	Nov.	Dec.
FPD Penta	220,000	200,000	160,000	175,000
Customer Penta	150,000	200,000	140,000	150,000
WTC Products	220,000	220,000	190,000	175,000
	590,000	620,000	490,000	500,000

### V Assistance Requirements

Repeat first four items last month, No. 5 cleared.

### VI General Comments

Increasing material costs will necessitate a general revision of cost standards in September.

### VII Travel & Meetings

Vacation Sept. 1 & 2, 19-21

R. F. Simmons

RFS/pdc

TOLS005003

# KOPPERS

## Interoffice Correspondence

cc: F. E. Boge  
J. F. Bridges  
J. R. Brummett  
G. J. Gill  
T. C. Hayson  
J. D. Hite  
F. M. Klasnick  
J. M. Montgomery  
J. D. Palmer  
G. A. Schultz

To T. A. Beatty  
Location K-1001  
Subject Monthly Report September 1977  
  
Wood Treating Chemicals

From R. F. Simmons  
Location St. Louis, Mo.  
Date October 3, 1977

### 1. Shipments September Accounting Month

#### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	10 X 55 Gal.
Woodtax S. Conc.	10 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxane I	2 X 55 Gal.
Liquid Noxane SSI	8 X 55 Gal.
Timbertreat 625	6 X 55 Gal.
KLB Beam Sealer	8 X 55 Gal.
Green End Spray 400	5 X 55 Gal.
Lumbrella 15 Yellow	8 X 55 Gal.
Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 33 Redwood Soft	15 X 55 Gal.
Lumbrella 33 Redwood Soft	216 X 3 Gal.
WTC #71	4 X 515 Lbs.
Dowicide GST Beads	5 X 100 Lbs.
Super Noxane	39 X 50 Lbs.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxane I	4 X 55 Gal.
Liquid Noxane SSI	9 X 55 Gal.
Timbertreat 625	5 X 55 Gal.
Lumbrella 15 Yellow	3 X 55 Gal.
Lumbrella 33 Redwood Soft	12 X 55 Gal.
Dowicide GST Beads	1 X 100 Lbs.

TOLS005004

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	9 X 345 Gal.
Liquid Noxtane SSI	4 X 305 Gal.
Liquid Noxtane SSI	134 X 55 Gal.
Liquid Azide 200	17 X 55 Gal.
Clear End Sealer	2 X 300 Gal.
Clear End Sealer	8 X 55 Gal.
Blue End Sealer	4 X 55 Gal.
Orange End Sealer	4 X 55 Gal.
Pellets	14 Ea.

### (5) Cotton Valley, Louisiana Blender

Woodtax 140 RTU	0
<u>(6) Portland, Oregon Blender</u>	
Rody Coat Penta RTU	q
Woodtax Preprime RTU	58 X 55 Gal.
Woodtax Preprime RTU	5685 Gal. Bulk
Woodtax 140-T Conc.	80 X 55 Gal.
Woodtax 140-T RTU	60 X 55 Gal.
WR 340 Conc.	20 X 55 Gal.
Petroset II	6 X 408 Gbs.
Timbertox 40 Conc.	12 X 460 Lbs.
	1 X 55 Gal.

### (7) Saugat, Illinois Blender

Penta Wood Pres. Conc. M	0

### (8) Phoenix, Arizona Blender

Woodtax 140T RTU	0
------------------	---

TOLS005005

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### (9) St. Louis, Missouri Plant

Woodtax Preprime RTU	42,399 Gal. Bulk
Woodtax 140 RTU	5,447 Gal. Bulk
Penta Wood Pres. Conc. M	4,264 Gal. Bulk
Penta Wood Pres. Conc.	4,152 Gal. Bulk
Woodtax Preprime Conc.	13 X 55 Gal.
Woodtax Preprime RTU	6 X 55 Gal.
Woodtax 140 Conc.	40 X 55 Gal.
Woodtax 140 RTU	4 X 55 Gal.
Woodtax RTU	15 X 55 Gal.
Woodtax RTU	108 X 5 Gal.
Woodset 310 Conc.	2 X 55 Gal.
Woodtax 152 RTU	1 X 55 Gal.
Timbertox D-5	1 X 55 Gal.
Penta Wood Pres. Conc.	28 X 55 Gal.
Penta Wood Pres. Conc.	10 X 5 Gal.
Penta Wood Pres. RTU	5 X 55 Gal.
Poletox	35 X 348 Lbs.
Tritox	4 X 60 Lbs.
Woodtreat AA	6 X 220 Lbs.
Timbertreat 625	4 X 55 Gal.
Timbertreat 625	1 X 5 Gal.
Liquid Noxtane I	2 X 55 Gal.
Green End Spray 400	1 X 55 Gal.
Lumbrella 33 Redwood Soft	81 X 3 Gal.
Lumbrella 33 Yellow Soft	162 X 3 Gal.
WTC #71	6 X 515 Lbs.
WTC #7-11	10 X 40 Lbs.
KLB Beam Sealer	14 X 55 Gal.
Wood Seal Wax	20 X 40 Lbs.
Petroset II	8 X 460 Lbs.
Clear End Sealer	5 X 55 Gal.
Super Noxtane	54 X 50 Lbs.
Penta Stain 501	5 X 5 Gal.
Penta Stain 502	2 X 55 Gal.
Penta Stain 502	10 X 5 Gal.
Penta Stain 506	10 X 5 Gal.
Penta Stain 508	4 X 55 Gal.

TOLS005006

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-4-

### Penta Shipments September Calendar Month Lbs.

	1977	1976	1975
From Monsanto			
FPD Plants	504,714	622,256	359,175
Customers	271,748	378,158	250,234
WTC	139,000	247,264	75,500
Total	915,462	1,247,678	684,909
From Vulcan			
FPD Plants	41,620		

### Invoicing (\$) September Accounting Month

	1977	1976	1975
FPD Penta	244,571	168,254	120,504
Customer Penta	144,207	129,398	53,816
WTC Products	238,724	296,637	219,017
Total	627,502	594,289	393,337

### II Raw Materials

Penta - Out of the last four bulk loads (one rail car to Feather River, one truck to IP-Wiggins, MS and 2 trucks to Montgomery for 9/14 and 10/13) we had to secure the Montgomery loads from Vulcan. On 9/12 Monsanto advised the 14th load would have to be delayed two days which would have shut Montgomery down. The 10/3 load arrived wet and could not be unloaded, nor could it be replaced before 10/7, again necessitating the switch to Vulcan material. To our knowledge production of 2,000 Lb. blocks have ceased and as none are in stock, are no longer available. Inventory of penta Oct 1 was 160 X 1000 Lb. blocks and 220,000 Lbs. in bags. Monsanto's plant has no liquid penta concentrate (we have 10,000 Gal. in St. Louis inventory) having cleared their storage tank to make repairs.

TOLS005007

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-5-

Solvents - Increases on mineral spirits did occur Oct. 1 as reported in our last report. Contrary to what we have been told, Oxo bottoms have not been made available to us; our tankcar shipped to Texas City August 16 for loading is still in Monsanto's plant. We probably have sufficient inventory of Oxo to make normal product shipments to year-end, but certainly want to get all we can to save reformulation if possible.

Chemicals - Other increased materials include paraffin wax .01 lb. by Shell, pigments by Harshaw .04-.06 per pound, Petrosol II by Lubrizol approx. .02 per pound, Hitec E-515 (corrosion inhibitor) by Edwin Cooper .021 per pound.

### III Inventory & Expenses

August closing inventory (computer)	695,801
September purchases	237,361

Raw material	214,809
Finished Goods	14,636
Containers	7,916

September raw material converted to finished goods	186,151
September estimated cost of goods sold	177,849
September estimated closing inventory	755,313
October estimated closing inventory	690,000
November estimated closing inventory	670,000
December estimated closing inventory	625,000

#### September Plant Expenses

Detail 130 Safety	289
170 Rent	25
190 Office Expenses & Svcs.	572
270 Telephone	420
331 Tankcars	(874)
350/351 Repairs & Maint.	412
370 Printing & Supplies	63
381 Fuel & Power	481
390/392 Operating Supplies (Incl. \$635 City Tank & Hazardous Matl Permits)	1041
520 Prof. Svcs (Traffic & Lab)	783

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-6-

540/456 Chemical Pumps	354
391 (573) Tote Bins	1215
170 Warehouses Rent	1240
390 Warehouses Operating Expense	1101
395 Warehouses Freight	1461
	<u>8314</u>

### IV Sales Forecast (\$)

	Oct.	Nov.	Dec.
FPD Penta	200,000	200,000	175,000
Customer Penta	150,000	150,000	150,000
WTC Products	220,000	200,000	175,000
	<u>570,000</u>	<u>550,000</u>	<u>500,000</u>

Recent survey of FPD plants indicate a probable 1.4 million pound usage for the balance of 1977. Customer penta is not going well in October @ \$50,000 to date, and we will do well to make our forecast.

### V Assistance Requirements.

1. Cosolvent picture no improvement. Nothing developing with Monsanto making more oxo available, nor no new source material appearing worthy of consideration.
2. No change Rinchem inventory status.
3. Still need work outside location overhead application and material slippage factor application to standards with help of Klasnick.

### VI General Comments

Review and revision of many product cost standards again in October.

### VII Travel & Meetings.

October 21 One day vacation.

R. F. Simmons

TOLS005009

# KOPPERS

cc: J. D. Hite  
File Copy  
J. R. Brummett  
J. M. Montgomery  
J. D. Palmer  
G. A. Schultz

## Interoffice Correspondence

To T. A. Beatty

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report October 1977

Date October 26, 1977

Wood Treating Chemicals

### I Shipments October Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox 140 Conc.	6 X 55 Gal.
Woodtox 140 RTU	3 X 55 Gal.
Woodtox Preprime Conc.	4 X 55 Gal.
Woodtox Preprime RTU	1 X 55 Gal.
Penta Wood Pres. Conc.	1 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	8 X 53 Gal.
Lumbrella 15 Yellow	4 X 53 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Redwood Soft	15 X 55 Gal.
Lumbrella 33 Redwood Soft	81 X 3 Gal.
Liquid Noxtane SSI	6 X 55 Gal.
Liquid Noxtane I	5 X 55 Gal.
Super Noxtane	20 X 50 Lbs.
Green End Spray 400	5 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Wood Seal Wax	1 X 426 Lbs.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	9 X 55 Gal.
Lumbrella 33 Yellow Soft	2 X 55 Gal.
Lumbrella 33 Redwood Soft	13 X 55 Gal.
Lumbrella 33 Redwood Soft	27 X 3 Gal.
Liquid Noxtane SSI	10 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Dowicide GST Beads	4 X 100 Lbs.

TOLS005010

BZTO104(e)041831

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxiane 311	1 X 345 Gal.
Liquid Noxiane 551	60 X 55 Gal.
Liquid Penta 200	11 X 55 Gal.
Clear Enz Sealer	11 X 55 Gal.
Orange Enz Sealer	4 X 55 Gal.
Blue Enz Sealer	2 X 55 Gal.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	0
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### (6) Portland, Oregon Blender

Woodtox 140-T RTU	7031 Gal. Bulk
Redy Coat Penta Conc.	10 X 55 Gal.
Timbertox 40 Conc.	2 X 55 Gal.
Petroset 11	2 Y 400 Lbs.

### (7) Saugat, Illinois Blender

Penta Wood Pres. Conc. N	4414 Gal. Bulk
--------------------------	----------------

### (8) Phoenix, Arizona Blender

Woodtox 140-T RTU	0
-------------------	---

### (9) St. Louis, Missouri Plant

Woodtox Preprime RTU	52722 Gal. Bulk
Woodtox Preprime Conc.	4029 Gal. Bulk
Woodtox 140 RTU	6000 Gal. Bulk
Woodtox Preprime Conc.	14 X 55 Gal.
Woodtox Preprime RTU	23 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.
Woodtox RTU	311 X 5 Gal
Woodtox 152 RTU	10 X 5 Gal.

TOLS005011

BZTO104(e)041832

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Penta Wood Pres. Conc.	15 X 55 Gal.
Penta Wood Pres. Conc.	5 X 5 Gal.
Penta Wood Pres. RTU	8 X 55 Gal.
WR 340 Conc.	40 X 400 Lbs.
Poletox	60 X 60 Lbs.
Timbertreat 625 Conc.	3 X 55 Gal.
Timbertreat 625 Conc.	5 X 5 Gal.
Liquid Noxtane I	2 X 55 Gal.
Lumbrella 15 Redwood	10 X 55 Gal.
Lumbrella 25 Cherry Tone	50 X 55 Gal.
Lumbrella 33 Clear	10 X 55 Gal.
Lumbrella 33 Yellow Soft	54 X 3 Gal.
Anstrik Blue Conc.	1 X 5 Gal.
Red End Sealer	4 X 5 Gal.
Clear End Sealer	1 X 5 Gal.
Super Noxtane	60 X 50 Lb.
WTC #74	1 X 460 Lbs.
Woodtreat AA	3 X 40 Lbs.
Polelife Tags/Nails	500 Ea.
Penta Stain #502	9 X 5 Gal.
Penta Stain #503	2 X 5 Gal.
Penta Stain #506	1 X 5 Gal.
Penta Stain #507	8 X 5 Gal.
Penta Stain #509	4 X 55 Gal.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Penta Shipments October Calendar Month Lbs.

To	Monsanto	Reichhold	Vulcan	Total
FPD Plants		215,400	205,400	420,800
Customers	108,732			
	+18,100			126,832
WTC	42,000			
	-18,100			23,900
				571,532

Comparison	1976	1975 (Monsanto supplied all)
FPD	537,223	368,952
Customers	316,747	250,707
WTC	69,000	35,400
Total	922,970	655,059

### Invoicing (\$) October Accounting Month

	1977	1976	1975
FPD Penta	139,488	236,865	174,972
Customer Penta	83,979	252,106	95,838
WTC Products	182,883	258,406	206,955
Total	406,350	747,377	477,765

### II Raw Materials

Penta - Monsanto's inventory is at 1.4 million pounds, and they are getting anxious for orders. Their plans are continuing for a mid-November strike. Material from other sources secured with minimal problems. Reichhold blocks well received at Florence.

Solvents - Increases on mineral spirits expected again Nov. 1-15. One car Oxo bottoms received late October, another car supposed to be made available early November; no substitute Preprime TRU formula yet approved to utilize any small amount of another co-solvent. This is still needed as Oxo inventory continues to decrease.

Chemicals - No unreported increases. No urgent supply problems.

TOLS005013

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### III Inventory & Expenses

Computer reports are continuing to not be available at report writing time, thus all figures except month's purchases and expenses will be marked "E" for estimates.

September closing inventory	E 755,313
October purchases	120,273
Raw material	109,816
Finished goods	460
Containers	9,997
October Raw Material converted to Finished Goods	82,247
October cost of goods sold	E 142,000
October closing inventory	E 733,536
November closing inventory	E 670,000
December closing inventory	E 650,000
October Plant Expenses	
Detail 130 Safety	252
170 Rent	25
190 Office Exp. & Svcs.	332
270 Telephone	387
290 Postage	13
331 Tankcars	(182)
350/351 Repairs & Maint.	875
370 Printing & Supplies	7
381 Fuel & Power	2448
390/392 Operating Supplies	181
520 Prof. Svcs.	625
391 (573 Tote Bins	924
170 Warehouses Rent	1209
*390 Warehouses Opr. Exp.	5270
395 Warehouses Freight	1829
	<u>14377</u>

\*390 Whse. charge with October includes pump expenses (\$574). It is additional high because of Jones-Hamilton September blending, which was not involved until October.

TOLS005014

BZTO104(e)041835

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-6-

### IV Sales Forecast (\$)

	Nov.	Dec.	Jan.
FPD Penta	180,000	200,000	200,000
Customer Penta	95,000	120,000	150,000
WTC	200,000	175,000	175,000
	<u>475,000</u>	<u>495,000</u>	<u>525,000</u>

### V Assistance Requirements

1. No new co-solvents found, some candidates trialed and two samples coming, but no earth shattering prospects.
2. No change in Rinchem inventory status.
3. Slippage of materials vs. standards reconciled in October. Expect outside overhead application to be accomplished in January.

### VI General Comments

Continuing decline of sales, both lumber chemicals and penta, needs immediate salesmens' concentration. We, at plant level, have and are continuing telephone contact.

### VII Travel & Meetings

Nov. 18 & 23 - Vacation days.

R. F. Simmons

RFS/pdc

TOLS005015

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	14 X 345 Gal.
Liquid Noxtane SSI	98 X 55 Gal.
Liquid Azide 200	11 X 55 Gal.
Red End Sealer	10 X 55 Gal.
Orange End Sealer	8 X 55 Gal.
Clear End Sealer	4 X 55 Gal.
Blue End Sealer	2 X 55 Gal.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	5998 Gal. Bulk
-----------------	----------------

### (6) Portland, Oregon Blender

Woodtox Preprime T RTU	27123 Gal. Bulk
Woodtox Preprime T RTU	42 X 55 Gal.
Woodtox 140 T RTU	30 X 55 Gal.
Redy Coat Penta Conc.	20 X 55 Gal.
Redy Coat Penta Conc.	17 X 55 Gal.
WR 340 Conc.	6 X 408 Lbs.
Timbertox 40 Conc.	1 X 55 Gal.

### (7) Saugat, Illinois Blender

Penta Wood Pres. Conc. M	0
--------------------------	---

### (8) Phoenix, Arizona Blender

Woodtox 140 T RTU	0
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TOLS005016

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### (9) St. Louis, Missouri Plant

Woodtox Preprime RTU	44143 Gal. Bulk
Woodtox Preprime RTU	8 X 55 Gal.
Woodtox Preprime Conc.	6 X 55 Gal.
Woodtox 140 Conc.	12 X 55 Gal.
Woodtox 140 RTU	5000 Gal. Bulk
Woodtox 140 RTU	6 X 55 Gal.
Woodtox 150 RTU	3 X 55 Gal.
WR 340 Conc.	20 X 400 Lbs.
Penta Wood Pres. Conc.	3 X 55 Gal.
Penta Wood Pres. RTU	3 X 55 Gal.
Penta Wood Pres. RTU	7 X 1 Gal.
Woodtreat AA	6 X 40 Lbs.
Poletox	65 X 348 Lbs.
Poletox	90 X 57 Lbs.
Timbertreat 625	5 X 55 Gal.
Liquid Noxtane I	4 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
WTC 7-11	1 X 430 Lbs.
WTC #71	5 X 515 Lbs.
Red End Sealer	1 X 55 Gal.
Green End Sealer	10 X 5 Gal.
Clear End Sealer	2 X 5 Gal.
Lumbrella 33 Yellow Soft	891 X 3 Gal.
Penta Stain #502	2 X 55 Gal.
Penta Stain #505	1 X 55 Gal.
Penta Stain #508	1 X 55 Gal.
Penta Stain #509	5 X 55 Gal.

TOLS005017

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Penta Shipments November Calendar Month Lbs.

To	Monsanto	Supplier	Comparison		
			1976	1975	
FPD Plants	0	Reichhold	119,740	442,605	537,223
Customers	392,172	43,170	0	435,342	316,747
WTC	169,242*	0	0	169,242	69,000
	561,414	366,035	119,740	1,047,189*	922,970
					1,145,217

\* Includes warehouse stocking against likelihood of strike.

### Invoicing (\$) November Accounting Month

	1977	1976	1975
FPD Penta	218,940	198,706	166,952
Customer Penta	169,798	116,437	178,014
WTC Products	215,850	207,732	134,201
Total	604,588	522,875	479,167

### II Raw Materials

Penta - Monsanto's plant out of production the entire week of Nov. 28. Little change in Monsanto's inventory - still hovering at two million pound level.

Material warehoused in anticipation of strike will all be removed in December.

Reichhold continues to be most eager to serve and meet all challenges with efficient service.

Solvents - Spot shortages of LEP mineral spirits developing, being reflected in pricing. Portland material raised 3¢ Gal. Nov. 1. Rumors are rampant of St. Louis increase for year-end of 6¢ gallon. We expect upward pricing trend to continue until regular mineral spirits equals regular gasoline pricing.

Oxo bottoms are being released to us at 8,000 Gal. per month, which just about keeps us even on supply vs. need.

TOLS005018

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

Chemicals - Ethylene Glycol up 2 to 3¢ per pound.  
Lithium Hydroxide up 3¢ per pound.  
Boric Acid up 2+¢ per pound.  
Potassium Dichromate up part 1¢ per pound.  
GAF & Harshaw have increased pigments.

At least there are only minor supply problems.

### III Inventory & Expenses

October closing Inventory	677,432
November Purchases	146,459

Raw Material	132,177
Finished Goods	7,542
Containers	6,740
(Resale Penta)	287,796

November raw material converted to finished goods	167,757
November estimated cost of goods sold	168,000
November estimated closing Inventory	655,891
December estimated closing inventory	650,000
January estimated closing inventory	670,000

### November Plant Expenses

Detail		
130 Safety	218	
170 Rent	25	
190 Office Expenses & Svcs.	332	
270 Telephone	371	
331 Tankcars	(777)	
350/351 Repairs & Maintenance	1607	
370 Printing & Supplies	90	
381 Fuel & Power	140	
390/392 Operating Supplies	225	
520 Lab & Traffic Services	610	
550 Subscription	23	
170 Warehouse Rent	1182	
390 Warehouse Operating Exp.	737	
395 Warehouse Freight	1189	
391 Tote Bins	1733	
	8482	

TOLS005019

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### IV Sales Forecast

	December	January	February
FPD Penta	138,600	180,000	170,000
Customer Penta	104,150	140,000	160,000
WTC	135,000	200,000	200,000
	<u>377,750</u>	<u>520,000</u>	<u>530,000</u>

### V. Assistance Requirements.

1. Critical need for lower cost materials, particularly preprime, indicates need for different materials to make the product. No relief in cost in sight for current materials.

2. Rinchem inventory unchanged.

### VI General Comments

FPD penta in December lower than normal due to Oroville & Montgomery cellon being down most of the month. Inclement weather expected to affect some customer penta and lumber chemical sales.

### VII Travel & Meetings

#### November

2/3 day at Monsanto with Mr. Hite, Beatty, Pier, McPhillips.  
1 day at Caradco, Rantoul, IL. with J. Palmer  
2 half days vacation.

#### December

6 & 7 Pittsburgh  
27-29 Vacation (Hopefully)

R. F. Simmons

RFS/pdc

TOLS005020

CC: P. D. Brattain  
File Copy  
J. R. Brummett  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

Interoffice Correspondence

To T. A. Beatty

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report December 1977

Date December 30, 1977

Wood Treating Chemicals Dept.

1. Shipments December Accounting Month

(1) Camden, New Jersey Warehouse

Woodtox 5	5 X 55 Gal.
Woodtox Preprime Conc.	1 X 55 Gal.
Penta Wood Pres. Conc.	2 X 55 Gal.

(2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	8 X 55 Gal.
Timbertreat 625 Conc.	17 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Lumbrella 33 Redwood S	7 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 15 Yellow	16 X 53 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 15 Redwood	1 X 53 Gal.
KLB Beam Sealer	8 X 55 Gal.
Mold Control Conc.	1 X 5 Gal.

(3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	12 X 55 Gal.
Liquid Noxtane I	7 X 55 Gal.
Green End Spray 400	7 X 55 Gal.
Penta Stain #509	2 X 55 Gal.
Lumbrella 15 Yellow	3 X 53 Gal.
Lumbrella 33 Clear	4 X 55 Gal.
Lumbrella 33 Redwood S	9 X 55 Gal.
Lumbrella 33 Yellow S	3 X 55 Gal.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouses

Liquid Noxtane SSI	6 X 345 Gal.
Liquid Noxtane SSI	96 X 55 Gal.
Liquid Azide 200	16 X 55 Gal.
Red End Sealer	5 X 55 Gal.

### (5) Cotton Valley, Louisiana Blender

0

### (6) Portland, Oregon Blender

Redy Coat Penta Conc.	20 X 55 Gal.
Redy Coat Penta RTU	20 X 55 Gal.
Woodtox Preprime T RTU	1518 Gal. Bulk
Woodtox Preprime T RTU	2 X 55 Gal.
Woodtox 140 T RTU	2016 Gal. Bulk
Woodtox 140 T RTU	42 X 55 Gal.
WR 340 Conc.	12 X 408 Lbs.
Petroset II	2 X 460 Lbs.
Timbertox 40 Conc.	1 X 55 Gal.

### (7) Sauget, Illinois Blender

0

### (8) Phoenix, Arizona Blender

0

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### (9) St. Louis, Missouri Plant

Woodtox Preprime Conc.	4041 Gal. Bulk
Woodtox Preprime Conc.	7 X 55 Gal.
Woodtox Preprime RTU	46700 Gal. Bulk
Woodtox Preprime RTU	7 X 55 Gal.
Woodtox 152 RTU	1 X 55 Gal.
Penta Wood Pres. Conc.	4004 Gal. Bulk
Penta Wood Pres. Conc.	14 X 55 Gal.
Penta Wood Pres. Conc.	1 X 5 Gal.
Penta Wood Pres. RTU	1 X 5 Gal.
Timbertox D-5	1 X 55 Gal.
Polelife TF	11 X 45 Lbs.
Polelife Tags	2 Lots.
Polykraft Paper	5 Rolls
WTC #71	4 X 515 Lbs.
WTC #7-11	10 X 40 Lbs.
Anstrik Blue Conc. 50	1 X 5 Gal.
Clear End Sealer	4 X 55 Gal.
Wood Seal Wax	1 X 426 Lbs.
KLB Beam Sealer	2 X 55 Gal.
Lumbrella 33 Yellow S	81 X 3 Gal.
Dowicide GST Beads	60 X 100 Lbs.
Penta Stain #502	2 X 5 Gal.
Penta Stain #506	20 X 5 Gal.
Penta Stain #509	1 X 55 Gal.
Wolman Pre Stain Cedar Brown	4 X 55 Gal.
Wolman Pre Stain Redwood	2 X 55 Gal.
Penta Check	6 Qts.

TOLS005023

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Penta Shipments December Calendar Month - Lbs.

To	WTC	Monsanto	Reichhold	Vulcan	Total	Dec. Comparison	
						Supplier	1976
FPD	159,642*	119,800	39,630	40,000	359,072		278,164
Cust	12,800	107,938	124,205	-	244,943		366,312
WTC	-	42,000	-	-	42,000		-
Total	172,442	269,738	163,835	40,000	646,015		644,476
							622,901

\* Warehouse cleanout, after anticipated Monsanto strike did not happen.

### Invoicing (\$) December Accounting Month

	1977	1976	1975
FPD Penta	155,338	176,070	294,191
Customer Penta	140,014	143,224	108,139
WTC Products	159,337	185,584	198,726
Total	454,689	503,878	601,056

### II Raw Materials

Penta - Monsanto plant out of production half of December. Even so, sales so low for the month that inventory still rose.

Solvents - Announced Jan. 1 Increases now on mineral spirits of from 6¢ to 9¢ per gallon depending on grade. Also announcements on ethylene glycol +3¢ Lb., acetone +1¢ Lb., and isopropanol \_1¢ Lb.

Chemicals - Lithium hydroxide +3¢ Lb., potassium ferrocyanide +5¢ Lb. and Santolene +2¢ Lb.

TOLS005024

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### III Inventory & Expenses

November closing inventory (est. no reports available)	655,891
December Purchases	108,060
Raw Materials	104,806
Finished Goods	479
Containers	2,775
(Pesale Penta.)	247,680)
December Raw Material converted to finished goods	150,050
December estimated cost WTC products sold	134,500
December estimated closing inventory	629,451
January estimated closing inventory	650,000
February estimated closing inventory	670,000
March estimated closing inventory	670,000

Physical inventory of December 20 now being compiled and costed.

December Plant Expenses	
Detail!	
130 Safety	303
170 Rent	25
190 Office Expenses & Svcs.	332
270 Telephone	386
290 Postage	150
331 Tankcars	280
350/351 Repairs & Maint	502
370 Stationery & Printing	52
381 Fuel & Power	239
390/392 Direct Op. Expense	629
520 Prof. Svcs. (Traffic & Lab.)	610
170 Whse Rent	1275
390 Whse Op. Exp.	7725*
395 Whse Freight	1512
391 Tote Bins	251
Chem Pumps	223

\* Includes two months blending bills at Jones-Hamilton

TOLSO05025

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### IV Sales Forecast

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>
FPD Penta	180,000	170,000	190,000
Customer Penta	140,000	160,000	200,000
WTC Products	175,000	200,000	200,000
	495,000	530,000	590,000

### V Assistance Requirements

Repeat last month, situation worsening.

### VI General Comments

Dow has announced March 15, withdrawal of manufacture of sodium penta entirely and production of penta prills and pellets, leaving blocks only. At present this leaves us in a dilemma for Liquid Noxane production when no more EC-7 prills are available. We will attempt to stock for 6 months production while searching for a solution, in lieu of block dissolver installation.

### VII Travel & Meetings

December  
6-7 Pittsburgh  
27 1 Day Vacation

January (Tentative)  
3-4 Bud Harris (at St. Louis)  
Week 16th Portland & Newark  
Week 23rd Quality Assurance Inspection

R. F. Simmons

RFS/pdc

TOLS005026

cc: J. D. Hite  
File Copy  
J. R. Brummett  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To T. A. Beatty

From R. F. Simmons

Location K-1001

Location St. Louis, MO.

Subject Monthly Report January 1978

Date February 1, 1978

Wood Treating Chemicals Dept.

### I Shipments January Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox Preprime RTU	1 X 55 Gal.
Woodtox 140 RTU	2 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Lumbrella 33 Redwood Soft	19 X 55 Gal.
Lumbrella 33 Redwood Soft	162 X 3 Gal.
Lumbrella 15 Yellow	1 X 53 Gal.
Green End Spray 400	2 X 55 Gal.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	15 X 55 Gal.
Lumbrella 33 Redwood Soft	5 X 55 Gal.
Green End Spray 400	1 X 55 Gal.
WTC #71	1 X 515 Lb.

#### (4) Newark, California Warehouse

Liquid Noxtane SSI	20 X 55 Gal.
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#### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	854 Gal. Bulk
-----------------	---------------

TOLS005027

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (6) Portland, Oregon Blender

Woodtox Preprime RTU	6044 Gal. Bulk
Woodtox Preprime RTU	80 X 55 Gal.
Woodtox 140 T RTU	41 X 55 Gal.
Woodtox 140 T Conc.	1 X 55 Gal.
Redy Coat Penta Conc.	30 X 55 Gal.
Redy Coat Penta RTU	10 X 55 Gal.
Timbertox 40 Conc.	4083 Gal. Bulk
WR 340 Conc.	6 X 408 Lb.

### (7) Sauget, Illinois Blender

0

### (8) Phoenix, Arizona Blender

0

### (9) St. Louis, Missouri Plant

Woodtox Preprime RTU	24571 Gal. Bulk
Woodtox Preprime RTU	7 X 55 Gal.
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox 140 RTU	1018 Gal. Bulk
Woodtox 140 Conc.	80 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.
Penta Wood Pres. RTU	7 X 55 Gal.
Penta Wood Pres. Conc	5 X 55 Gal.
Tritox	4 X 57 Lb.
Timbertreat 625	1 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
Liquid Noxtane SSI	1 X 55 Gal.
Green End Sealer	10 X 5 Gal.
Blue Anstrik 50 Conc.	1 X 5 Gal.
WTC #71	5 X 515 Lb.
Dowicide GST Beads	160 X 50 Lb.
Super Noxtane	322 X 100 Lb.
Lumbrella 33 Redwood S	27 X 3 Gal.
Red/Orange End Spray 400	4 X 55 Gal.
Black End Spray 400	2 X 55 Gal.

TOLS005028

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Penta Stain #502	2 X 5 Gal.
Penta Stain #504	5 X 55 Gal.
Penta Stain #508	4 X 55 Gal.
Penta Stain #509	3 X 55 Gal.

### Penta Shipments January Calendar Month - Lbs

To	Supplier				Total	Jan. Comparison	
	WTC	Monsanto	Reichhold	Vulcan		1977	1976
FPD	-	-	180,927	80,000	260,927	395,335	398,381
Customer	51,600	42,000	93,900	-	187,500	301,893	290,860
WTC	-	-	-	-	-	70,700	67,650
	<u>51,600</u>	<u>42,000</u>	<u>274,827</u>	<u>80,000</u>	<u>448,427</u>	<u>757,928</u>	<u>756,841</u>

### Invoicing (\$) January Accounting Month

	1978	1977	1976
FPD Penta	142,870	176,297	149,592
Customer Penta	49,785	102,211	62,512
WTC Products	131,328	170,369	129,753
Total	323,983	448,877	341,857

### II Raw Materials

Penta - No problems being encountered with distribution either Reichhold or Vulcan. We took into St. Louis a 2,000 Lb. box of Vulcan flakes that was carrier spilled enroute from Vulcan's plant to St. Louis warehousing; the product was exceptionally dark and produced unacceptable Woodtox Preprime upon testing. Conclusion: we will have to scrutinize Vulcan shipments and need to get assay reports and samplings from both Vulcan and Reichhold.

TOLS005029

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Mc Phillips reports Monsanto continuing production to the end of February. Weather conditions have not permitted much production however, and inventory situation has not been provided as requested, except in very non-descript terms.

Solvents - Oxo bottoms again increases 2¢/Lb; this makes 25% increase since Sept. 1, 1977.

Steel Containers - U. S. Steel making a big howl on reduced profits to justify their position on increase of 5-6% May 1st. Rheem also announced expected increase of about the same on May 1.

Pigments - Cat ink increase received today effective March 1 ranging from 4¢/Lb. to 22¢/Lb. Average per Lb. increase 8¢.

### III Inventory & Expenses

December closing inventory	630,939	630,939
January purchases		
Raw Materials	107,410	
Containers	8,758	
(Resale Penta)	191,493	
January raw material converted to finished goods	101,575	
January estimated cost WTC products sold	111,000	
January estimated closing inventory	636,107	
February estimated closing inventory	650,000	
March estimated closing inventory	670,000	
April estimated closing inventory	670,000	
Actual physical inventory year end St. Louis	439,388	
All other WTC locations	273,701	
January Plant Expenses		
Detail 130 Safety	273	
170 Rent	25	
190 Office Expenses & Svcs	599	
270 Telephone	383	
290 Postage	14	
331 Tankcars	(289)	TOLS005030

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

350/351 Repairs & Maint.	113
370 Stationary & Printing	34
390/392 Direct Operating Expense	455
520 Prof. Svcs (Traffic & Lab.)	468
170 Whse. Rent	1232
390 Whse. Op. Expense	660
395 Whse. Freight	1149
391 Tote Bins	1692
Chem. Pumps	1205

### ESTIMATED CAPITAL EXPENSES

#### IV Sales Forecast

	Feb.	Mar.	Apr.
FPD Penta	170,000	200,000	200,000
Customer Penta	160,000	175,000	200,000
WTC Products	175,000	200,000	200,000
	505,000	575,000	600,000

#### V Assistance Requirements

1. Sales - Weather has been a plague for two months. Situation has to improve!
2. To our situation we have no solution if Dow discontinues EC-7 prills as scheduled. It is bound to cost plenty to convert to using block EC-7 for Liquid Noxtane, if possible at all.

#### VI General Comments

December closing physical reported. Terry Franklin, plant worker, laid off Feb. 10. Cecelia Wright, office, retired end of January.

TOLS005031

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### VII Travel & Meetings

#### January

3-4 Bud Harris - Pittsburgh photographer.  
12 & 20 - Monsanto, scrap penta inspection  
30 & 31 - Harry Fry, Orrville, quality assurance inspection (to our knowledge, no plant gigs.)

#### February

2-3 - Newark, CA (LN-SSI production quality problems) and visit suppliers.  
6 - Reichhold, Tacoma, Wa.  
7-8 - Portland, OR Plant - Safety seminar, supplier visits.

R. F. Simmons

RFS/pdc

TOLS005032

cc: J. D. Hite  
File Copy  
J. R. Brummett  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To T. A. Beatty

From R. F. Simmons

Location K-1001

Location St. Louis, Mo

Subject Monthly Report February 1978

Date March 1, 1978

Wood Treating Chemicals Dept.

### I Shipments February Accounting Month

#### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	12 X 55 Gal.
Woodtox Preprime Conc.	7 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 25 Brown	11 X 55 Gal.
Lumbrella 33 Redwood S	54 X 3 Gal.
Lumbrella 33 Redwood S	3 X 55 Gal.
Green End Spray 400	2 X 55 Gal.
Woodtox 140 Conc.	1 X 55 Gal.
NTA/NA3	1 X 50 LBs.

#### (3) Atlanta, Georgia Warehouse

Green End Spray 400	3 X 55 Gal.
Liquid Noxtane SSI	1 X 55 Gal.

#### (4) Newark, California Warehouse

Liquid Noxtane SSI	8 X 345 Gal.
Liquid Noxtane SSI	45 X 55 Gal.
Liquid Azide 200	14 X 55 Gal.
Red End Sealer	10 X 55 Gal.

#### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	6175 Gal. Bulk
-----------------	----------------

TOLS005033

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (6) Portland, Oregon Blender

Redy Coat Penta Conc.	20 X 55 Gal.
Redy Coat Penta RTU	20 X 55 Gal.
Woodtox Preprime T RTU	6790 Gal. Bulk
Woodtox Preprime T RTU	141 X 55 Gal.
Woodtox 140 T RTU	1048 Gal. Bulk
Woodtox 140 T Conc.	60 X 55 Gal.
WR 340 Conc.	76 X 408 Lbs.
Petroset II	1 X 460 Lbs.

### (7) Sauget, Illinois Blender

0

### (8) Phoenix, Arizona Blender

0

### (9) St. Louis, Missouri Plant

Woodtox Preprime RTU	59704 Gal. Bulk
Woodtox Preprime Conc.	10165 Gal. Bulk
Woodtox Preprime Conc.	7 X 55 Gal.
Woodtox RTU	5063 Gal. Bulk
Woodtox RTU	54 X 5 Gal.
Woodtox 140 RTU	3040 Gal. Bulk
Woodtox 140 RTU	8 X 55 Gal.
Woodtox 140 Conc.	45 X 55 Gal.
Penta Wood Pres. RTU	3 X 55 Gal.
Penta Wood Pres. RTU	2 X 5 Gal.
WR 340 Conc.	50 X 400 Lbs.
Poletox	20 X 57 Lbs.
Dowicide GST	40 X 50 Lbs.
WTC #71	8 X 515 Lbs.
KLB Beam Sealer	14 X 55 Gal.
Blue Anstrik Conc.	3 X 5 Gal.
Lumbrella Yellow S	27 X 3 Gal.
Lumbrella 33 Redwood S	56 X 3 Gal.
Penta Stain #502	2 X 55 Gal.
Penta Stain #504	3 X 55 Gal.

TOLS005034

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Penta Stain # 506                            20 x 5 Gal.  
Penta Stain # 509                            2 X 55 Gal.

### Penta Shipments Feb. Calendar Month-Lbs.

		Supplier				Feb. Comparison		
To	WTC	Monsanto	Reichhold	Vulcan	Total	1977	1976	
FPD	-	39900	193246	164720	397866	398331	395335	
Customer	27800	162488	-	-	190288	290860	70700	
WTC	-	-	125950	-	125950	67650	301893	
	27800	202388	319196	164720	714104	756841	767928	

### Invoicing Feb. Accounting Month

	1978	1977	1976
FPD Penta	116641	134009	163210
Customer Penta	92592	131482	100354
WTC Products	195914	289341	139335
Total	405147	554832	402899

### II Raw Materials

#### Penta - Monsanto Inventory as of 2/21

1,640,350 Lbs. 50# Bags, Single Pallets  
567,000 Lbs. 50# Bags, Double Pallets  
1,015,000 Lbs. 1000# Blocks  
3,222,350 Lbs.

Monsanto did run until the end of February. Monsanto has 6000 Gal. of Penta Concentrate in the plant that we committed for, that we will have to take soon to allow their shutdown; we have 19,000 Gal. and tank is full.

Solvents - No Increases during February, none announced for March.

Chemicals - Several minor items up. Wax at Portland up .04/lb., Petrosol announced but no amount set, Tadco dye up .60/lb.

TOLS005035

513067

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### III Inventory and Expenses

January closing inventory	684,063
February purchases	125,311
Raw Materials      100,824	
Containers          350	
Resale products     24,137	
(Resale Penta       94,893)	
February materials converted to products	152,248
February estimated cost WTC products sold	158,886
February estimated closing inventory	650,488
March estimated closing inventory	675,000
April estimated closing inventory	700,000
May estimated closing inventory	700,000
February Plant Expenses	
Detail	
130 Safety	822 (Includes 495 for plant emp. physical)
170 Rent	25
190 Office Expenses & Svcs	332
270 Telephone	397
290 Postage	151
331 Tankcars	(784)
350/351 Repairs & Maint.	130
370 Stationery	19
381 Fuel & Power	4343 (Incl. plant part 2 loads oil)
390/392 Operating Expense	359
520 Professional Svcs.	520 (Traffic & Lab)
170 Whse Rent	1123
390 Whse Oper. Expense	5041 Blending Newark & Portland
391 Tote Bin Maint	42
Chem. Pumps	884
Capital Expenses February	5171

TOLS005036

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### IV Sales Forecast

	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>
FPD Penta	250,000	200,000	230,000
Customer Penta	170,000	155,000	170,000
WTC Products	225,000	250,000	225,000
	645,000	605,000	625,000

### V Assistance Requirements

1. Solution to Dow discontinuance of EC-7 in prill form.
2. Decision whether to pursue import sodium penta.
3. Sales.

### VI General Comments

We are slowly losing accounts because we are not active:

1. Research
  - A. Immediate need to overhaul present formulations of major products within label limitations to utilize less costly raw materials.
  - B. With a few products, concentrates or more concentrated formulations are needed.
    - (1) Wolman Prestain
    - (2) Lumbrella
  - C. Improved quality product replacement, or new product for same market.
  - D. New market products - for instance, we have no interest in particleboard or plywood plants.
2. Sales
  - A. Penta - customer orders continue to fall. There is a limit to what can be blamed on weather conditions of this winter.

TOLS005037

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

B. WTC Products - We are not competitively priced on many products. We are holding the accounts we have only because of superior product, good delivery and personal contact of field salesman with the account.

A cost study of Liquid Noxtane 120, SS and SSI was run for Portland production.

Work on solution and concentrate costing various locations continues; Harry Trautman, corporate purchasing, has been out on sick leave for some time and costing inquiry of oils has not been answered.

Non-EPA registered WTC products label revision proceeding hardly at all.

We still have 110 Gal. Conc. and 792 Gal. 140-T RTU in Phoenix.

Cotton Valley 140 RTU inventory reduced 12000 gallons to 18000 gallons ending February. Several inquiries the past few days are causing optimism for closeout 6-8 weeks.

### VII Meetings/Travel

Feb. 2-8 Jones-Hamilton, Newark, CA - Reichhold Chemicals, Tacoma, WA - Time Oil Co., Portland, OR. 1/2 half day at Monsanto Plant, Sauget, IL.

Feb. 15 Loss Prevention Survey of our facility - Lee Allison.

March 2 or 3 - Asplundh visit to St. Louis with Mr. Hite.

March 8 - TOSCA seminar in St. Louis.

March 24 - Plant Holiday, Good Friday

R. F. Simmons

RFS/pdc

TOLS005038

cc: J. D. Hite  
File Copy  
J. R. Brummett  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To T. A. Beatty

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report March 1978

Date April 1, 1978

### Wood Treating Chemicals Dept.

#### 1. SHIPMENTS MARCH ACCOUNTING MONTH

##### (1) Camden, New Jersey Warehouse

Woodtax 140 RTU	13 X 55 Gal.
Woodtax Preprime RTU	1 X 55 Gal.
Penta Stain #509	2 X 55 Gal.
Super Noxtane	57 X 50 Lbs.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 33 Redwood Soft	11 X 55 Gal.
Lumbrella 33 Redwood Soft	27 X 3 Gal.
Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 15 Yellow	5 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
KLB Beam Sealer	8 X 55 Gal.
Liquid Noxtane I	4 X 55 Gal.
Liquid Noxtane SSI	20 X 55 Gal.
Super Noxtane	90 X 50 Lbs.
Dowicide GST Beads	10 X 100 Lbs.
Dowicide GST Beads	40 X 50 Lbs.

##### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Redwood Soft	13 X 55 Gal.
Lumbrella 33 Clear	11 X 55 Gal.
Lumbrella 33 Yellow Soft	2 X 55 Gal.
Lumbrella 33 Yellow Soft	27 X 3 Gal.
Liquid Noxtane I	4 X 55 Gal.
Liquid Noxtane SSI	10 X 55 Gal.
Green End Spray 400	2 X 55 Gal.
Dowicide GST Beads	4 X 100 Lbs.
NTC #71	4 X 515 Lbs.

TOLS005039

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	8 X 345 Gal.
Liquid Noxtane SSI	153 X 55 Gal.
Liquid Azide 200	16 X 55 Gal.
Clear End Sealer	15 X 55 Gal.
Orange End Sealer	9 X 55 Gal.
Blue End Sealer	3 X 55 Gal.
Pallets	12 Ea.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	6081 Gal. Bulk
-----------------	----------------

### (6) Portland, Oregon Blender

Woodtox Preprime T RTU	242 X 55 Gal.
Woodtox Preprime T RTU	10288 Gal. Bulk
Woodtox 140 T Conc	10 X 55 Gal.
Woodtox 140 T RTU	40 X 55 Gal.
Woodtox 140 T RTU	1026 Gal. Bulk
WR 340 Conc.	30 X 408 Lbs.
Timbertox 40 Conc.	1 X 55 Gal.
Petroset II	1 X 460 Gbs.

### (7) Saugat, Illinois Blender

0

### (8) St. Louis, Missouri Plant

Woodtox Preprime RTU	38647 Gal. Bulk
Woodtox Preprime RTU	22 X 55 Gal.
Woodtox Preprime Conc.	25 X 55 Gal.
Woodtox Preprime Conc.	4011 Gal. Bulk

TOLS005040

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Woodtox 140 Conc.	2 X 55 Gal.
Woodset 310 Conc.	2 X 55 Gal.
WR 340 Conc.	10 X 400 Lbs.
Penta Wood Pres. Conc.	16 X 55 Gal.
Penta Wood Pres. Conc.	12 X 5 Gal.
Penta Wood Pres. RTU	3 X 55 Gal.
Penta Wood Pres. RTU Dark	2 X 55 Gal.
Timbertreat 625	2 X 55 Gal.
Liquid Noxtane 1	2 X 55 Gal.
Liquid Noxtane SS1	11 X 55 Gal.
Lumbrella 15 Redwood	10 X 53 Gal.
KLB Beam Sealer	2 X 55 Gal.
Clear End Sealer	2 X 55 Gal.
WTC #71	3 X 515 Lbs.
WTC 7-11	9 X 40 Lbs.
Grey Pole Stain	1 X 5 Gal.
Dating Nails	2 Lots.

### Penta Shipments March Calendar Month Lbs.

To	Supplier	March Comparison				
		1977	1976			
FPD	Vulcan	200160	220680	119258	-	540098
Customer		40000	43175	231404	11000R	352979
					27400M	
WTC		-	40250		(38400)	43850
Total		240160	304105	392662	-	936927
						1107017
						1089757

### Invoicing March Accounting Month

	1978	1977	1976
FPD Penta	222477	188102	131413
Customer Penta	77864	233948	189048
WTC Products	222726	171267	240423
Total (Less Credits)	521860	593317	560884

TOLS005041

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### II. Raw Materials

#### Penta Inventory - Monsanto as of 3/29/78

1,598,100 Lbs. In 50# bags, Single pallets  
323,400 Lbs. In 50# bags, Double pallets  
994,000 Lbs. In 1000# Blocks  
2,915,500 Plus scrap, previously discussed.

Vulcan Penta - 5 truckloads refused this month: 3 by warehouse account of weather conditions at loading time, two bulk loads for Oroville by Howard Stedman.

Solvents - Shell increased mineral spirits .03/gallon April 1; others will follow this lead.

Chemicals - Tenneco Cal Ink pigments raised .02 to .12/lb. Various colors we use; GAF raised .05 lb. Tall oil fatty acid raised .02 lb. Predictions are for paraffin waxes to get in tighter supply this summer and we suspect another increase.

Containers - all steel container manufacturers are setting up for a 5-6% increase at least by May 1.

### III Inventory & Expenses

February closing inventory	586549
March purchases	228742
Raw Material	197013
Containers	20233
Resale Products	11496
(Resale Penta	198595 - 1408)
(Resale Penta	73653 - 1414)
March material converted to products	131235
March estimated costs WTC products sold	185308
March estimated closing inventory	629983
April estimated closing inventory	675,000
May closing inventory	700000
June estimated closing inventory	700000

TOLS005042

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date 613 - 24 ft<sup>k</sup>

-5-

### March Plant Expenses

#### Detail

130 Safety	235
170 Rent	25
190 Office Expenses & Svcs	332
270 Telephone	386
290 Postage	16
331 Tankcars	148
350/351 Repair & Maint.	420
370 Stationery	(269)
381 Fuel & Power	2422 Incl. plant part one load oil
390/392 Operating expenses	234
520 Prof. Svcs.	430 Lab & Traffic
550 Subscriptions	75
170 Whse Rent	1378
390 Whse Oper. Exp.	1237
395 Whse freight	1320
318-391-573 Tote bins	0
Pumps - St. Louis	145
- West Coast	482
Capital expenses - March	0

### IV. Sales Forecast

	<u>April</u>	<u>May</u>	<u>June</u>
FPD Penta	200,000	190,000	200,000
Customer Penta	200,000	260,000	200,000
WTC Products	225,000	250,000	250,000
	625,000	700,000	650,000

### V. Assistance Requirements.

- 1-2-3 Same as last month.
4. Still no movement at Phoenix.
5. Still have 2 plus truckloads at Cotton Valley.

TOLS005043

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### VI. General Comments

Laboratory has samples of Monsanto drummed penta tower scrap for analysis. Only samples yet to come are off-spec blocks. John Mc Phillips getting a little eager.

Last of Monsanto penta concentrate moved to our plant this month, instead of about 1-1/2 T/L, it turned out to be one 3/4 full truck. We have four loads for sale before needing the Monsanto scrap.

We have been visited by Kemper boiler Insurance Inspector and city inspectors for scales and elevator during the month.

Frank Brock visited the dermatologist 3/31, for removal of facial acne. No other medical activity. Tony floretta called for jury duty beginning April 3.

### VII Meetings/Travel

March 8 Struessel attended TOSCA seminar in St. Louis.

March 31 Paul Goydan in St. Louis.

April - open except for sales meeting.

R. F. Simmons

RFS/pc

TOLS005044

# KOPPERS

## Interoffice Correspondence

cc: J. D. Hite  
File Copy  
J. R. Brummett  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

To T. A. Beatty  
Location K-1001  
Subject Monthly Report April 1978

From R. F. Simmons  
Location St. Louis, Mo.  
Date May 3, 1978

Wood Treating Chemicals Dept.

### 1. Shipments April Accounting Month

#### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.	18 X 55 Gal.
Woodtox 140 Conc.	10 X 55 Gal.
Woodtox 140 RTU	2 X 55 Gal.
Woodtox 140 RTU	27 X 5 Gal.
Woodtox Preprime RTU	1 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I	3 X 55 Gal.
Liquid Noxtane SSI	26 X 55 Gal.
Liquid Azide 200	14 X 55 Gal.
Green End Spray 400	3 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Redwood H	27 X 3 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 33 Redwood S	12 X 55 Gal.
Clear End Sealer	6 X 5 Gal.
Wood Seal Wax	1 X 426 Lbs.
Super Noxtane	60 X 50 Lbs.
Dowicide GST Beads	36 X 100 Lbs.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	6 X 55 Gal.
Lumbrella 33 Yellow S	27 X 3 Gal.
Lumbrella 33 Redwood S	13 X 55 Gal.
Liquid Noxtane SSI	18 X 55 Gal.
Dowicide GST Beads	6 X 100 Lbs.
Penta Wood Pres. RTU	2 X 55 Gal.
Woodtox 140 RTU	2 X 55 Gal.
Red End Spray 400	1 X 55 Gal.
Red Orange End Spray 400	6 X 55 Gal.

TOLS005045

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	8 X 345 Gal.
Liquid Noxtane SSI	153 X 55 Gal.
Liquid Azide 200	16 X 55 Gal.
Clear End Sealer	15 X 55 Gal.
Orange End Sealer	9 X 55 Gal.
Blue End Sealer	3 X 55 Gal.
Pallets	12 Ea.

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU	3000 Gal. Bulk
-----------------	----------------

### (6) Portland, Oregon Blender

Redy Coat Penta Conc.	7 X 55 Gal.
Redy Coat Penta RTU	48 X 55 Gal.
Woodtox 140 T RTU	7004 Gal. Bulk
Woodtox 140 T Conc.	110 X 55 Gal.
Woodtox Preprime T RTU	2045 Gal. Bulk
WR 340 Conc.	6 X 408 Lbs.

### (7) St. Louis, Missouri Plant

Woodtox Preprime Conc.	3961 Gal. Bulk
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox Preprime RTU	48234 Gal. Bulk
Woodtox Preprime RTU	7 X 55 Gal.
Woodtox 140 Conc.	20 X 55 Gal.
Woodtox 140 RTU	10 X 55 Gal.
Woodtox 152 RTU	1 X 55 Gal.
Woodtox 152 RTU	15 X 5 Gal.
Woodtox S Conc.	10 X 55 Gal.

TOLS005046

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Penta Wood Pres. Conc. M	12998 Gal. Bulk
Penta Wood Pres. Conc.	22 X 55 Gal.
Penta Wood Pres. Conc.	12 X 5 Gal.
Penta Wood Pres. 65%ac.	3 X 55 Gal.
Penta Wood Pres. RTU	5 X 5 Gal.
Timbertox D-5	2 X 55 Gal.
Wolman Prestain Redwood	50 X 55 Gal.
Wolman Prestain Cedar	20 X 5 Gal.
Woodtreat Mold Control	1 X 55 Gal.
Poletox	64 X 348 Lbs.
Woodtreat AA 1	20 X 40 Lbs.
Woodtreat AA Tubes	90 Ea.
Woodtreat AA Gun	1 Ea.
Timbertreat 625	8 X 55 Gal.
Liquid Noxtane SSI	37 X 55 Gal.
Green End Sealer	10 X 5 Gal.
Red End Sealer	1 X 55 Gal.
Clear End Sealer	3 X 55 Gal.
Wood Seal Wax	1 X 426 Lbs.
KLB Beam Sealer	12 X 55 Gal.
WTC #71	5 X 515 Lbs.
WTC #74	2 X 460 Lbs.
WTC #7-11	1 X 440 Lbs.
Lumbrella 15 Redwood	21 X 53 Gal.
Lumbrella 15 Yellow	20 X 53 Gal.
Lumbrella 25 Brown	5 X 55 Gal.
Lumbrella 25 Cherry Tone	50 X 55 Gal.
Lumbrella 33 Yellow S	891 X 3 Gal.
Lumbrella 33 Yellow S	1 X 55 Gal.
Lumbrella 50 Orange	1 X 55 Gal.
Super Noxtane	176 X 50 Lbs.
Dowicide GST Beads	2 X 50 Lbs.
Dowicide GST Beads	50 X 100 Lbs.
Penta Stain #501	2 X 5 Gal.
Penta Stain #502	2 X 55 Gal.
Penta Stain #502	34 X 5 Gal.
Penta Stain #506	2 X 5 Gal.
Penta Stain #508	2 X 5 Gal.
Penta Stain #509	1 X 55 Gal.

TOLS005047

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Penta Shipments April Calendar Month - lbs.

To	Vulcan	Reichhold	Monsanto	WTC	Total	<u>April Comparison</u>	
						1977	1976
FPD	202,820	192,630	39,900	-	435,350	315,517	*490,680
Customer	-	213,480	178,004	13,200	404,684	368,892	*900,931
WTC	-	42,600	-	-	42,600	32,200	59,900
Total	202,820	448,710	217,904	13,200	882,634	716,609	*1,451,511

\*Due to price increase May 1

### Invoicing April Accounting Month \$

	1978	1977	1976
FPD Penta	187,034	200,494	212,452
Customer Penta	216,655	161,401	264,972
WTC Products	305,503	225,160	235,908
Total (less credits)	709,073	587,055	713,330

### II. Raw Materials

#### Penta - Monsanto inventory as of 4/30/78

1,501,500 Lbs. - 50# Bags Single Pallets  
 243,600 Lbs. - 50# Bags Double Pallets  
 952,000 Approx. Lbs. - 1,000# Blocks

Solvents - As reported, March report, Shell's mineral spirit increase is holding and other suppliers are following the lead.

Pigments - Harshaw followed Tenneco Cal Ink Division's increase also. Tadco dye up 45¢ Lb.

Chemicals - Cab-o-sil up 8¢ Lb. Lithium Hydroxide up 3¢ Lb.

Containers - May 1 increases, all suppliers about 6% as reported last month.

TOLS005048

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

No supply problems at present although the following are in short market condition: mineral spirits LEP Rule 66, slabbed paraffin wax, boric acid.

### III. Inventory and Expenses

March Closing Inventory	688,121
April Purchases	203,172
Raw Material	187,777
Containers	7,663
Resale Products	7,732
(Resale Penta FPD	89,309 - 1408)
(Resale Penta Cust	150,088 - 1414)
April Material Converted to Products	127,809
April estimated costs WTC products sold	250,818
April estimated closing inventory	640,475
May estimated closing inventory	675,000
June estimated closing inventory	700,000
July estimated closing inventory	700,000
 Total WTC estimated plant expenses - April	
Salaries & Wages (10-11-13-16-50)	9,302
Employee Benefits (70-90-95-110-113)	3,188
Travel Expense (210-215-216-230-232)	282
Office Expense (incl. \$1270 Whses Direct)	2,334
Maint. & Repair Labor & material	849
Direct Supplies (444 Tankcars)	632
Warehousing & Blend fee	4,880
Pumps	1,233
Indirect Expense	331
Tote Bins	716
Hauling Expense	174
Consulting & Prof. Svcs. (Lab & Traffic)	618
Depreciation & Amortization (Estimate)	1,811
Insurance & Taxes (Estimate) (101 Plant Payroll)	3,500
Total	29,850

Beginning with this month, this expense format includes WTC total operating expense and except for depreciation, Insurance & taxes, be quite reliable.

TOLS005049

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### IV. Sales Forecast

	<u>May</u>	<u>June</u>	<u>July</u>
FPD Penta	190,000	200,000	180,000
Customer Penta	210,000	200,000	175,000
WTC Products	<u>250,000</u>	<u>250,000</u>	<u>225,000</u>
	<u>650,000</u>	<u>650,000</u>	<u>580,000</u>

### V. Assistance Requirements

Resolve procuring Monsanto scrap penta to assure continuance of supply for our new concentrate customers.

### VI. General Comments

As to further comment on the Monsanto scrap and concentrate production for treating plants, with a shipment on 5/8 to Stallworth, we will have only one product load left on hand.

Our sample of LN-SSI made with technical production penta and filtered by Carborundum is still showing no signs of flocculation after 7 weeks of freeze/thaw testing. We have trial filtered 2 production batches of LN-SSI with Carborundum cartridge filters this week and will be comparing this to our standard Cuno filtration later this week. If results are as expected, we will purchase a Carborundum bag filter (\$300) for a two-stage filtration of one standard batch made with technical penta instead of EC-7 and monitor the results closely.

Since our marketing decision on sodium penta has been to sell out our present Super Noxtane and discontinue the product and sell out the stock of Dowicide G-ST beads at increased pricing, we assume all current customers are being notified of the products discontinuance and our liquid alternates.

Remaining product has moved from Rinchem at Phoenix in April, closing out this location.

The last merchantible product was shipped from Cotton Valley, April 19 & 20, too late to make April billing. Cleanup operation will include return to St. Louis of a short bulk car for settling, separation of sludge & color lightening to recover the last approximately 4000 gallon. This may not get completed in May because the refinery is currently undergoing their annual turn around.

TOLS005050

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

The Acme insurance inspection was made and report did not make any change recommendations.

Medical Surveillance Activity- Brock visited the dermatologist three times in April. Some very persistent nodes exist on inner, upper thighs in spite of all precautions taken.

Tony Floretta's jury duty consisted of 1 day.

Overhead reallocation efforts continue slowly due to increased load on personnel in midst of spring sales increase.

### VII. Meetings - Travel

April 27-28 Pittsburgh - T. Beatty, F. Klasnick

April 19-20 F. Klasnick & R. Stefanski to St. Louis

May 9-10 Valparaiso

May 16-18 Pittsburgh Sales Meeting

R. F. Simmons

RFS/pdc

TOLS005051

cc: ~~T. A. Beatty~~  
File Copy  
J. R. Brummett  
P. A. Goydan  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report May 1978

From R. F. Simmons  
Location St. Louis, Mo.  
Date June 1, 1978

Wood Treating Chemicals Dept.

### 1. SHIPMENTS MAY ACCOUNTING MONTH

#### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	19 X 55 Gal.
Woodtox Preprime RTU	11 X 55 Gal.
Penta Wood Pres. Conc.	12 X 55 Gal.
Penta Wood Pres. RTU	2 X 5 Gal.
Penta Stain #509	3 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	14 X 55 Gal.
Liquid Noxtane I	5 X 55 Gal.
KLB Beam Sealer	8 X 55 Gal.
Lumbrella 12 Red Brown	4 X 53 Gal.
Lumbrella 15 Redwood	2 X 53 Gal.
Super Noxtane	40 X 50 Lbs.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	10 X 55 Gal.
Lumbrella 33 Redwood S	5 X 55 Gal.
Woodtox Preprime Conc.	1 X 55 Gal.
Green End Spray 400	5 X 55 Gal.
Red Orange End Spray 400	3 X 55 Gal.
Red End Spray 400	2 X 55 Gal.
Poletox	10 X 57 Lbs.

#### (4) Newark, California Warehouse

Liquid Noxtane SSI	10 X 345 Gal.
Liquid Noxtane SSI	62 X 55 Gal.
Red End Sealer	5 X 55 Gal.
Orange End Sealer	2 X 55 Gal.
Blue End Sealer	1 X 55 Gal.
Clear End Sealer	1 X 55 Gal.

TOLS005052

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (5) Cotton Valley, Louisiana Blender

Woodtox 140 RTU

11325 Gal. Bulk

### (6) Portland, Oregon Blender

Redy Coat Penta Conc.

25 X 55 Gal.

Redy Coat Penta RTU

25 X 55 Gal.

Woodtox 140 T RTU

50 X 55 Gal.

Woodtox Preprime T RTU

7073 Gal. Bulk

Woodtox Preprime T RTU

80 X 55 Gal.

WR 340 Conc.

12 X 408 Lbs.

Petroset II

6 X 460 Lbs.

### (7) St. Louis, Missouri Plant

Woodtox Preprime RTU

49577 Gal. Bulk

Woodtox Preprime RTU

72 X 55 Gal.

Woodtox Preprime Conc.

25 X 55 Gal.

Woodtox Preprime Conc.

10 X 5 Gal.

Woodtox 140 RTU

12 X 55 Gal.

Woodtox 140 RTU

15 X 5 Gal.

Woodtox 140 Conc.

20 X 55 Gal.

Woodtox RTU

540 X 5 Gal.

Woodtox 152 RTU

4004 Gal. Bulk

Woodtox 152 RTU

1 X 5 Gal.

Penta Wood Pres. Conc. M

4290 Gal. Bulk

Penta Wood Pres. Conc.

4074 Gal. Bulk

Penta Wood Pres. Conc.

7 X 55 Gal.

Penta Wood Pres. Conc.

50 X 5 Gal.

Penta Wood Pres. RTU

4 X 55 Gal.

Penta Wood Pres. RTU

2 X 5 Gal.

Penta Wood Pres. RTU Dark

5 X 55 Gal.

Ginn Penta Wood RTU

10 X 55 Gal.

Ginn Penta Wood RTU

50 X 5 Gal.

WR 340 Conc.

64 X 400 Lbs.

TOLS005053

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Timbertreat 625	3 X 55 Gal.
Timbertreat 625	7 X 5 Gal.
Poletox	412 X 57 Lbs.
Woodtreat AA	2 X 40 Lbs.
Timbertox D-5	2 X 55 Gal.
Holman Prestain Cedar Brown	7 X 55 Gal.
Holman Prestain Cedar Brown	4 X 5 Gal.
WTC #71	9 X 515 Lbs.
WTC #74	1 X 460 Lbs.
Liquid Noxtane I	2 X 55 Gal.
Liquid Noxtane SSI	54 X 55 Gal.
KLB Beam Sealer	14 X 55 Gal.
Clear End Sealer	6 X 55 Gal.
Clear End Sealer	5 X 5 Gal.
Lumbrella 33 Redwood Soft	108 X 3 Gal.
Lumbrella 33 Yellow Soft	2 X 55 Gal.
Dowicide GST Beads	22 X 50 Lbs.
Super Noxtane	69 X 50 Lbs.
Penta Stain #502	3 X 55 Gal.
Penta Stain #502	78 X 5 Gal.
Penta Stain #504	1 X 5 Gal.
Penta Stain #506	6 X 5 Gal.
Penta Stain #508	6 X 5 Gal.
Penta Stain #509	2 X 55 Gal.

### Penta Shipments May Calendar Month- Lbs.

To	Suppliers				Total	May Comparison	
	Vulcan	Reichhold	Monsanto	WTC		1977	1976
FPD	323,700	202,625	39,900	-	566,225	518,073	397,447
Customer	-	206,070	268,969	42,250	517,289	403,249	208,460
WTC	-	80,500	42,000	-	122,500	200,850	35,000
Total	323,700	489,195	350,869		1,206,014	1,123,172	640,907

TOLS005054

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Invoicing May Accounting Month - \$

	<u>1978</u>	<u>1977</u>	<u>1976</u>
FPD Penta	221,657	133,576	139,786
Customer Penta	191,906	181,774	148,322
WTC Products	261,449	288,172	275,992
	675,012	603,522	564,100

### II Raw Materials

#### Penta - Monsanto Inventory as of 5/31

1,379,700 Lbs. - 50 # Bags Single Pallets  
136,500 Lbs. - 50 # Bags Double Pallets  
830,000 Lbs. - 1000 # Blocks

No supply problems, no increases not reported last month.

Market supply becoming shorter on better grades of mineral spirits.

### III Inventory and Expenses

April Closing Inventory	617,037
May Purchases	164,440
Raw Material 147,898	
Containers 15,402	
Resale Products 1,140	
(Resale Penta FPD 154,017 - 1408)	
(Resale Penta Customers 130,458 - 1414)	
May material converted to products	162,542
May estimated costs WTC products sold	130,000
May estimated closing inventory	651,477
June estimated closing inventory	675,000
July estimated closing inventory	675,000
August estimated closing inventory	675,000

TOLS005055

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### Total WTC estimated plant expenses - May

Salaries & Wages (10-11-13-16-50)	9,003
Employee Benefits (70-90-95-110-113)	3,201
Travel Expense (210-215-216-230-232)	436
Office Expense (Incl. \$1249 whse. direct)	2,128
Maint & Repair Labor and Material	1,024
Direct Supplies (-1503 Tankcars)	(1,439)
Warehouse & Blend Fee	3,992
Pumps	983
Indirect Expense	345
Tote Bins	264
Hauling Expense	513
Consulting & Prof. Svcs (Lab & traffic)	633
Subscriptions	75
Depreciation & Amortization (estimate)	1,811
Insurance & Taxes (estimate) (101 plant payroll)	4,400
	<u>27,369</u>

### IV Sales Forecast

	June	July	August
FPD Penta	200,000	200,000	180,000
Customer Penta	200,000	175,000	175,000
WTC Products	250,000	225,000	225,000
	<u>650,000</u>	<u>600,000</u>	<u>580,000</u>

### V Assistance Requirements

If Monsanto ever gets the contract for the scrap penta to Pittsburgh, expedite!

Rumors persist that two competitors will soon have on the market water based penta solutions; Is our research also preparing us?

TOLS005056

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

We are continuing to have Koppers plants with complaints and/or legitimate troubles with Vulcan penta.

The first complaint, from Gainesville, earlier documented to you has not been resolved to Hank Haemmerle's satisfaction to my knowledge. Although we could find nothing wrong in the lab with the Vulcan penta in the Gainesville oil used, Hank has not been convinced.

The second complaint, on June 1, came from Oroville. Two truckloads of Vulcan penta has been received there- April 10 & May 6 - and have finally worked thru their bulk system with complaints of dustiness, caking & reworking of batches of solution necessary because of low assay solution.

### VI General Comments

In-house tests of LN-SSI filtered with Carborundum's filters are still looking good. The Carborundum bag filter will be purchased soon and a trial batch of product made using Reichhold technical penta and tetra.

More clean-up product resulted from Cotton Valley than anticipated. A 4,000 Gal. car has been received in St. Louis, treated to color lighten and added to St. Louis storage. The car is now returning to Cotton Valley to clean out the remaining 2500 gallons.

We were inspected during the month by the Metro Sewer District and St. Louis Fire Department for routine inspections; no discrepancies noted.

There was no medical surveillance activity at St. Louis this month concerning chemicals. One unfortunate loss-time accident to Frank Brock happened however. What was originally felt April 30 to be a strained leg ligament finally resulted in a cartilage removal from his right knee on May 30.

St. Louis has no open AFE's.

TOLS005057

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

Whereas May will probably result in near actual overhead absorption, it is somewhat coincidental. Considerable remains to be done to complete the study and hopefully this can be accomplished in June.

### VII Meeting - Travel

May 11th - Valparaiso with T. Beatty

June 5 P.M. - D J Sales, Indianapolis

June 6 - Valparaiso

June 7 A.M. - D J Sales (for Holmanac unloading)

June 12th - St. Louis with J. Bretson, Reichhold

R. F. Simmons

RFS/pdc

TOLS005058

cc: T. A. Beatty  
File Copy  
J. R. Brummett  
P. A. Goydan  
J. M. Montgomery  
J. D. Palmer  
G. A. Schultz

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report June 1978

Date July 5, 1978

### Wood Treating Chemicals Dept.

1. Shipments June Accounting Month

#### (1) Camden, New Jersey Warehouse

Penta Wood Pres. Conc.  
Woodtox Preprime Conc.  
Woodtox Preprime RTU  
Woodtox S Conc.  
Woodtox 140 Conc.  
Dowicide GST Beads  
Super Noxtane

54 X 55 Gal.  
4 X 55 Gal.  
3 X 55 Gal.  
10 X 55 Gal.  
10 X 55 Gal.  
100 X 50 Lbs.  
40 X 50 Lbs.

#### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Redwood  
Lumbrella 15 Yellow  
Lumbrella 25 Brown  
Lumbrella 33 Redwood S  
Lumbrella 33 Redwood S  
Liquid Noxtane I  
Liquid Noxtane SSI  
Liquid Azide 200  
KLB Beam Sealer  
Green End Spray 400  
Timbertreat 625  
Super Noxtane  
Dowicide GST Beads  
Dowicide GST Beads

4 X 53 Gal.  
4 X 53 Gal.  
10 X 55 Gal.  
9 X 55 Gal.  
162 X 3 Gal.  
6 X 55 Gal.  
33 X 55 Gal.  
29 X 55 Gal.  
8 X 55 Gal.  
1 X 55 Gal.  
1 X 55 Gal.  
147 X 50 Lbs.  
20 X 100 Lbs.  
70 X 50 Lbs.

#### (3) Atlanta, Georgia Warehouse

Lumbrella 15 Yellow  
Lumbrella 33 Clear  
Lumbrella 33 Yellow S  
Lumbrella 33 Yellow S  
Lumbrella 33 Redwood S  
Liquid Noxtane I  
Liquid Noxtane SSI  
Green End Spray 400

4 X 53 Gal.  
5 X 55 Gal.  
2 X 55 Gal.  
27 X 3 Gal.  
10 X 55 Gal.  
4 X 55 Gal.  
13 X 55 Gal.  
1 X 55 Gal.

TOLS005059

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

Dowicide GST Beads  
WTC #71

9 X 100 Lbs.  
1 X 515 Lbs.

### (4) Newark, California Warehouse

Liquid Noxtane SSI  
Liquid Noxtane SSI  
Liquid Azide 200  
Clear End Sealer  
Red End Sealer

6 X 345 Gal.  
107 X 55 Gal.  
13 X 55 Gal.  
5 X 55 Gal.  
10 X 55 Gal.

### (5) Portland, Oregon Blender

Redy Coat Penta RTU  
Redy Coat Penta Conc.  
Woodtox Preprime T RTU  
Woodtox Preprime T RTU  
Woodtox 140 Conc.  
Timbertox 40 Conc.  
WR 340 Conc.  
Petroset II

44 X 55 Gal.  
16 X 55 Gal.  
84 X 55 Gal.  
11333 Gal. Bulk  
2 X 55 Gal.  
20 X 55 Gal.  
36 X 408 Lbs.  
10 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU  
Woodtox Preprime RTU  
Woodtox Preprime Conc.  
Woodtox RTU  
Woodtox RTU  
Woodtox RTU  
Woodtox 140 RTU  
Woodtox 140 RTU  
Woodtox 152 RTU  
Woodtox 140 Conc.  
WR 340 Conc.  
Ginn Penta Wood Pres. RTU  
Penta Wood Pres. Conc.  
Penta Wood Pres. Conc.  
Penta Wood Pres. RTU Dark  
Timbertox D-5  
B Wood Pres.

59680 Gal. Bulk  
6 X 55 Gal.  
30 X 55 Gal.  
8 X 55 Gal.  
40 X 5 Gal.  
4995 Gal. Bulk  
18 X 55 Gal.  
4 X 5 Gal.  
3 X 55 Gal.  
15 X 55 Gal.  
10 X 400 Lbs.  
50 X 5 Gal.  
32 X 55 Gal.  
11 X 5 Gal.  
1 X 55 Gal.  
1 X 55 Gal.  
10 X 5 Gal.

TOLS005060

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Polelife TF  
 Poletox  
 Woodtreat AA  
 Dowicide GST Beads  
 Super Noxtane  
 Poly Kraft Paper  
 WTC #71  
 WTC #74  
 Wood Seal Wax  
 KLB Beam Sealer  
 Wolman Prestain Cedar RTU  
 Blue Anstrik Conc.  
 Clear End Sealer  
 Clear End Sealer  
 Red End Sealer  
 Liquid Noxtane I  
 Timbertreat 625  
 Timbertreat 625  
 Penta Stain #502  
 Penta Stain #505  
 Penta Stain #506  
 Penta Stain #507  
 Penta Stain #508

10 X 50 Lbs.  
 65 X 348 Lbs.  
 10 X 40 Lbs.  
 60 X 50 Lbs.  
 80 X 50 Lbs.  
 5 Rolls  
 4 X 515 Lbs.  
 2 X 460 Lbs.  
 2 X 426 Lbs.  
 2 X 55 Gal.  
 1 X 5 Gal.  
 8 X 5 Gal.  
 8 X 55 Gal.  
 6 X 5 Gal.  
 1 X 5 Gal.  
 2 X 55 Gal.  
 3 X 55 Gal.  
 2 X 5 Gal.  
 74 X 5 Gal.  
 1 X 5 Gal.  
 1 X 5 Gal.  
 4 X 5 Gal.  
 2 X 5 Gal.

### Penta Shipments June Calendar Month - Lbs.

To	<u>Suppliers</u>			WTC	Total	<u>June Comparison</u>	
	Vulcan	Reichhold	Monsanto			1977	1976
FPD	160,000	109,400	198,580	0	467,980	589,997	238,050
Customers	0	85,630	448,305	19,850	553,785	480,422	219,820
WTC	0	80,500	0	0	80,500	82,000	148,100
	160,000	275,530	646,885	19,850	1,102,265	1,152,419	605,970

TOLS005061

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

19162\*

-4-

### Invoicing June Accounting Month - \$

	<u>1978</u>	<u>1977</u>	<u>1976</u>
FPD Penta	213,518	281,979	134,006
Customer Penta	193,107	166,834	85,371
WTC Products	279,969	219,720	308,310
	<u>686,594</u>	<u>668,533</u>	<u>527,687</u>

### II. Raw Materials

Penta - Monsanto Inventory as of 6/30/78  
1,031,100 Lbs. In 50# Bags  
666,000 Lbs. In 1000# Blocks

Vulcan has refused to give freight equalization on loads picked up in Wichita with Koppers trucks. We obviously will make pickups at Vulcan's St. Louis warehouse all possible, but the warehouse requires 24 hours notice for pickups and frequently delays that in lieu of loading in the rain and Koppers' trucking operation often does not know scheduling 24 hours in advance. To our knowledge there has been no resolution to Vulcan penta problems at Koppers' Gainesville & Oroville plants and these plants are requesting supply with other than Vulcan product. Tom Markley was having Dennis Lindsey visit Oroville two weeks ago, but have had no word of response yet.

Aliphatic and aromatic solvents are going up in price again. We have been at an average .566 per gallon for low end point, exempt mineral spirits; this average (5 sources) is expected to go up about .03 per gallon in the next two months. There will be corresponding increases for other materials. Market supply remains tight although we have not experienced any problems.

Steel Increases August 1 are expected to raise container costs about 5%.

TOLS005062

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### III. Inventory & Expenses

May closing inventory (Penta sold & invoiced, not paid for	(1408)	535,806
	(1414)	74,040
		46,100
		<u>655,946</u>
June Purchases		124,410
Raw Material	110,352	
Containers	11,418	
Resale Products	2,640	
(Resale Penta-FPD) (1408)	232,760	
(Resale Penta-Customers (1414)	173,719	
June material converted to products		147,009
June estimated costs WTC products sold		225,935
June estimated closing inventory		
Plus Penta sold & invoiced, not paid for 1408	67,915	
Plus Penta sold & invoiced, not paid for 1414	48,986	
Plus Penta rec'd, not paid for	1402	14,514
Less Supplier credits due		(12,821)
Less Inventory reserve June		<u>(769)</u>
		672,246
July estimated closing inventory		675,000
August estimated closing inventory		675,000
September estimated closing inventory		675,000
Total WTC estimated plant expenses - June		
Salaries & Wages (10-11-13-16-50)		11,400*
Employee Benefits (70-90-95-110-113)		2,829*
Travel Expense (210-215-216-230-232)		274
Office Expense (170-190-270-290-310-370)		
(inc 1266 warehouse direct)	2,208	
Maint, & Repair Labor & Mat'l.	692	
Direct Supplies (367 Tankcars)	502	
Warehousing & Blend fee	6.507	
Pumps	429	
Indirect expense	1,619	
Fuel & Power	457	
Consulting & Prof. Svcs. (Lab & Traffic)	678	
Subscriptions	16	
Depreciation & Amortization	1,811*	
INSURANCE & TAXES (134 PLANT PAYROLL)	<u>3,606*</u>	
	33,022	

TOLS005063

\*ESTIMATE

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### IV. Sales Forecast

	<u>July</u>	<u>August</u>	<u>September</u>
FPD Penta	200,000	180,000	200,000
Customer Penta	175,000	175,000	160,000
WTC Products	<u>225,000</u>	<u>225,000</u>	<u>225,000</u>
	600,000	580,000	585,000

### V. Assistance Requirements

1. Mansanto scrap penta purchase. The next treating plant concentrate will be made with technical penta in order to be prepared for an order.
2. How good is the competition water-based penta product?
3. Foam control of Prestain Concentrate.
4. Immediate removal of Conley payroll burden. This has cost us 7 to 8 man days per month from other work that should not have been put aside.

### VI. General Comments

AFE- No open WTC appropriations

Medical Surveillance - Frank Brock continues to be a lost time case since May 30 operation for knee cartilage removal; am expecting his return by the end of July. No other activity, except for my annual physical.

John Mc Dermott, Arthur Young auditor, spent June 19-20-21 &23 with us on inventory. He will have at least two more days when we are able to cost out the inventory.

### VII. Valparaiso Mix Plant

Production & Shipping & Inventory

Wolmanac made 403,000 oxide lbs.

Wolmanac shipped 396,705

\$116,927 inventory reduction May to June.

TOLS005064

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

### AFE Status

1991-\$15,307 expended June; this is the total to date on the new reactor.

4004- Open, no expenses. Hoses on order from Atlanta supplier, awaiting stainless couplings to fill order.

### Trucking

Larry Stewart, new driver, has now had two weeks Atlanta training, has completed physical & driver examinations, has spent 5 or 6 days transferring pentoxide from Kingbury to Valpo and should finally get to make his first loads to Pennsylvania next week.

The usual startup difficulties on anything have been experienced with the tractor & trailer, i.e. Field still dragging their heels on same state licensing, Indiana refusing trailer license because state tax not paid awaiting Fruehauf invoicing, awaiting product hose for trailer, etc. These situations have all been overcome to date.

### Medical Surveillance

Mix operator Tim Hampton has gone from nose bleeds in May diagnosed as viral infection to a severe rash on arms and stomach which has been diagnosed by a specialist as a nervous condition. Pending clearing of the rash, his sick leave has been used and this week he has been on light duty.

### Personnel

We ultimately think Hampton will be medically urged to leave our employ, leaving us looking for a permanent mix operator.

TOLS005065

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-8-

### VIII. Newark

Shipments	Honolulu	48,430 Lbs.
	Pacific	48,760
	Selma	32,260
	Exterior	47,590
		177,040

July schedule Selma, Exterior & Honolulu

Efforts proceeding to release one trailer back to Acme Transportation.

### IX. Meetings-Travel

June 5 - D.J., Indianapolis  
June 6 - Valpo  
July 9-15- Vacation, Scout Camp  
July 30-Aug. 5 - Vacation, Glen Schultz

R. F. Simmons

RFS/pc

TOLS005066

cc: T. A. Beatty  
File copy  
J. R. Brummett  
P. A. Goydan  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject Monthly Report July 1978

Date August 8, 1978

Wood Treating Chemicals Dept.

### I. Shipments July Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtax 140 Conc.  
Woodtax 140 RTU  
Woodtax Preprime Conc.  
Woodtax Preprime RTU  
Penta Wood Pres. Conc.  
Penta Stain #509

4 X 55 Gal.  
5 X 55 Gal.  
7 X 55 Gal.  
12 X 55 Gal.  
6 X 55 Gal.  
3 X 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI  
Liquid Noxtane I  
Liquid Azide 200  
Super Noxtane  
Dowicide GST Beads  
Lumbrella 12 Redwood  
Lumbrella 15 Redwood  
Lumbrella 15 Yellow  
Lumbrella 25 Brown  
Lumbrella 33 Yellow S  
Lumbrella 33 Redwood S  
Lumbrella 33 Redwood S  
Green End Spray 400

24 X 55 Gal.  
2 X 55 Gal.  
1 X 55 Gal.  
11 X 50 Lbs.  
22 X 50 Lbs.  
2 X 53 Gal.  
4 X 53 Gal.  
6 X 53 Gal.  
10 X 55 Gal.  
108 X 3 Gal.  
162 X 3 Gal.  
14 X 55 Gal.  
1 X 55 Gal.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI  
Timbertreat 625  
Lumbrella 33 Clear  
Lumbrella 33 Redwood S  
Red End Spray 400  
Red Orange End Spray 400  
Dowicide GST Beads  
Poletox

14 X 55 Gal.  
1 X 55 Gal.  
12 X 55 Gal.  
5 X 55 Gal.  
2 X 55 Gal.  
5 X 55 Gal.  
2 X 100 Lbs.  
50 X 57 Lbs.

TOLS005067

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	13 X 345 Gal.
Liquid Noxtane SSI	162 X 55 Gal.
Liquid Azide 200	8 X 55 Gal.
Clear End Sealer	6 X 55 Gal.
Red End Sealer	10 X 55 Gal.
Orange End Sealer	4 X 55 Gal.
Blue End Sealer	1 X 55 Gal.
Pallets	11 Ea.

### (5) Portland, Oregon Blender

Redy Coat Penta Conc.	35 X 55 Gal.
Redy Coat Penta RTU	35 X 55 Gal.
Woodtox Preprime T RTU	80 X 55 Gal.
Woodtox 140 Conc.	60 X 55 Gal.
Timbertox 40 Conc	3937 Gal. Bulk
Petroset II	6 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	41820 Gal. Bulk
Woodtox Preprime RTU	9 X 55 Gal.
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox 140 Conc.	82 X 55 Gal.
Woodtox 140 RTU	3000 Gal. Bulk
Woodtox RTU	4953 Gal. Bulk
Woodtox 152 RTU	5907 Gal. Bulk
Woodtox RTU	4 X 5 Gal.
Penta Wood Pres. Conc. M	8197 Gal. Bulk
Penta Wood Pres. Conc.	12 X 55 Gal.
Penta Wood Pres. RTU	35 X 55 Gal.
Ginn Penta Pres. RTU	7 X 55 Gal.
Poletox	1 X 348 Lbs.

TOLS005068

BZTO104(e)041889

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Woodtreat AA	2 X 40 Lbs.
Woodtreat AA Tubes	198 Ea.
WTC #71	10 X 515 Lbs.
WTC #7-11	1 X 440 Lbs.
Liquid Noxtane 1	1 X 55 Gal.
Timbertreat 625	7 X 55 Gal.
Timbertreat 625	4 X 5 Gal.
Wood Seal Wax	50 X 40 Lbs.
Clear End Sealer	3 X 55 Gal.
Red End Sealer	2 X 5 Gal.
Lumbrella 25 Cherry tone	12 X 55 Gal.
Lumbrella 25 Brown	2 X 55 Gal.
Wolman Prestain Conc. Redwood	13 X 55 Gal.
Wolman Prestain Conc. Redwood	1 X 3 Gal.
Dowicide GST Beads	107 X 50 Lbs.
Super Noxtane	30 X 100 Lbs.
Penta Stain #502	2 X 55 Gal.
Penta Stain #502	5 X 5 Gal.
Penta Stain #504	2 X 5 Gal.
Penta Stain #506	5 X 5 Gal.
Penta Stain #508	1 X 5 Gal.
Penta Stain #509	2 X 55 Gal.

### Penta Shipments July Calendar Month - Lbs.

To	<u>Supplier</u>				July Comparison		
	Vulcan	Reichhold	Monsanto	WTC	Total	1977	1976
FPD	80,000	81,490	119,325	-	280,815	335,220	611,089
Customer	40,000	120,500	207,197	21,350	389,047	360,787	315,796
WTC	-	163,070	42,000	-	205,070	91,900	26,000
Total	120,000	365,060	368,522	21,350	874,932	787,907	953,485

TOLS005069

BZTO104(e)041890

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Invoicing July Accounting Month -\$-

	1978	1977	1976
FPD Penta	104,223	186,890	196,855
Customer Penta	263,944	194,255	186,740
WTC Products	283,840	222,525	241,003
	652,008	543,990	624,598

### II. Raw Materials

#### Penta - Monsanto Inventory as of 8/3/78

783,300 Lbs. - 50# Bags Single Pallets  
544,000 Lbs. - 1000# Blocks  
8,000 Lbs. - 2000# Blocks  
1,335,300 Lbs.

#### Raw material Increases experienced this month include:

For Lumbrettas  
Hampol 120 .03 Lb.  
Hampene 100 .01 Lb.  
Tall Oil Fatty Acid .0275 Lb.

For Penta Stain  
Cobalt Drier .20 Lb.  
Lanvar Resin .01 Lb.

For Woodtax  
Nalco Inhibitor .16 Lb.  
Mineral Spirits .015 Gal. average

TOLS005070

BZTO104(e)041891

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### III. Inventory & Expenses

June closing inventory		
July Purchases		72,673
Raw Materials	72,612	
Containers	(53)	
Resale Products	114	
(Resale Penta FPD -1408	128,119)	
(Resale Penta Customers	194,350	-1414)
July material converted to products		172,257
July estimated costs WTC Products sold		219,336
July estimated closing inventory		391,289
August estimated closing inventory		560,000
September estimated closing inventory		700,000
October estimated closing inventory		680,000

### Total WTC Estimated Plant Expenses July

Salaries & Wages (10-11-13-16-50)	9773
Employee Benefits (70-90-95-110-113)	3002
Travel Expenses (210-215-216-230-232)	285
Office Expenses (Incl. whse direct 1289)	2385
Maint. & Repair labor & material	730
Direct Supplies (374 Tankcars)	985
Warehouse & Blend fee	1648
Pumps	305
Fuel & Power	1460
Indirect expense	462
Hauling expense	147
Consulting & Prof. Svcs (Lab & Traffic)	685
Subscriptions & donations	54
Depreciation & Amortization (estimate)	1811
Insurance & Taxes (plant payroll \$102)	4400
	28132

TOLS005071

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### IV. Sales Forecast

	<u>August</u>	<u>September</u>	<u>October</u>
FPD Penta	180,000	200,000	185,000
Customer Penta	175,000	160,000	140,000
WTC Products	225,000	225,000	200,000
	580,000	585,000	525,000

### V. Assistance Requirements

1. As near as we can tell in St. Louis we are no closer to the Monsanto penta scrap purchase. Two loads made with regular technical penta sold this month were hardly more than break even sales.

2. No progress made on foam control during manufacture of Wolmen Prestain Concentrate.

### VI. General Comments

No open AFE's for Wood Treating

Medical Surveillance - Frank Brock returned to work July 31; no other activity.

### VII. Valparaiso Mix Plant

Production - 403,000 oxide lbs.

Shipments - 229,675 oxide lbs. - Domestic

167,030 oxide lbs. - Koppers-Hickson

Inventory -\$291,121 \$51,000 reduction from June

AFE Status - 4210-1991-893 for reactor \$15,307 spent to date should have been transferred to location 43.

Contrary to T. Beatty letter July 24, no transfer of tractors or trailers have been made between locations 49 & 899 yet, so no property transfers should be made either.

4210-4004-899 trailer hoses, material purchased in July, no bills yet.

TOLS005072

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

### Medical

Trucking - No major problems. First full month of driving, Stewart will have driven sufficient mileage to cover his guaranteed minimum.

General - G. Schultz vacation week 7/31/78.

### VIII. Newark Mix Plant

Production	- 58,814 oxide lbs.
Shipments	- 48,570 lbs. Honolulu 39,740 lbs. Thunderbolt 39,850 lbs. Pacific Wood 38,270 Lbs. Selma

August Schedule - Honolulu, Hilo, Pacific Wood, Exterior Wood & one of these three possibly - Dent & Russell, Kellogg or Niedermeyer-Martin.

One trailer released back to Acme; picked up July 31, (Trailer #6059)

### IX. Meetings -Travel

Week July 10 - Vacation

Week July 31 - Valparaiso (Schultz vacation)

Aug. 9 - Pittsburgh appropriations meeting.

R. F. Simmons

RFS/pc

TOLS005073

# KOPPERS

## Interoffice Correspondence

cc:T. A. Bee  
File Copy  
J. R. Brummett  
P. A. Goydan  
G. A. Schultz  
J. M. Montggmery  
J. D. Palmer

To J. D. Hite

From R. Simmons

Location K-1001

Location St. Louis, MO

Subject Monthly Report August 1978  
Wood Treating Chemicals Dept.

Date September 2, 1978

### 1. Shipments August Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox 140 Conc.	15 x 55 Gal.
Woodtox 140 RTU	10 x 55 Gal.
Woodtox Preprime Conc.	2 x 55 Gal.
Woodtox Preprime RTU	10 x 55 Gal.
Penta Wood Pres. Conc.	6 x 55 Gal.
Penta Stain #509	1 x 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Nextane SSI	20 x 55 Gal.
Liquid Noxtane I	3 x 55 Gal.
Super Noxtane	30 x 50 Lbs.
Dowicide GST Beads	92 x 50 Lbs.
Lumbrella 15 Redwood	9 x 53 Gal.
Lumbrella 25 Brown	10 x 55 Gal.
Lumbrella 33 Redwood S	216 x 3 Gal.
Lumbrella 33 Redwood S	14 x 55 Gal.
Green End Spray	2 x 55 Gal.
KLB Beam Sealer	10 x 55 Gal.
Timbertreat 625 Conc.	2 x 55 Gal.

TOLS005074

BZTO104(e)041895

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SS1	6 x 55 Gal.
Liquid Noxtane 1	2 x 55 Gal.
Red Orange End Spray 400	5 x 55 Gal.
End Spray 400 Green	7 x 55 Gal.
Lumbrella 33 Redwood S	15 x 55 Gal.
Lumbrella 33 Yellow S	4 x 55 Gal.
Lumbrella 33 Clear	6 x 55 Gal.
Lumbrella 15 Yellow	4 x 55 Gal.

### (4) Newark, California Warehouse

Liquid Noxtane SS1	47 x 55 Gal.
Liquid Noxtane SS1	6 x 345 Gal.
Liquid Azide 200	16 x 55 Gal.

### (5) Portland, Oregon Blender

Redy Coat Penta Conc.	15 x 55 Gal.
Redy Coat Penta RTU	20 x 55 Gal.
Woodtox Preprime-T-RTU	1 x 55 Gal.
Woodtox 140 Conc.	20 x 55 Gal.
Woodtox Preprime-T-RTU	24075 Gal. Bulk
Woodtox 140 RTU	2975 Gal. Bulk
Woodtox 140-T-RTU	1000 Gal. Bulk
Timbertox 40 Conc.	105 x 55 Gal.
WR 340 Conc.	36 x 408 Lbs.

TOLS005075

43-4  
77

BZTO104(e)041896

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### (6) St. Louis, MO Plant

Woodtox Preprime RTU	43312 Gal. Bulk
Woodtox Preprime Coac.	3 x 5 Gal.
Woodtox Preprime Conc.	21 x 55 Gal.
Woodtox Preprime RTU	29 x 55 Gal.
Woodtox 140 RTU	12965 Gal. Bulk
Woodtox 140 RTU	10 x 55 Gal.
Woodtox 140 Conc.	45 x 55 Gal.
Woodtox RTU	329 x 5 Gal.
Woodtox RTU	56 x 55 Gal.
Woodtox rtu	4943 Gal. Bulk
Woodtox S Conc.	10 x 55 Gal.
Penta wood Pres. Conc.	3944 Gal. Bulk
Penta Wood Pres. Conc. ME	4200 Gal. Bulk
Penta Wood Pres. RTU	36 x 5 Gal.
Penta Wood Pres. RTU	9 x 55 Gal.
Penta Wood Pres. RTU D	2 x 55 Gal.
Penta Wood Pres. Conc.	62 x 55 Gal.
Penta Wood Pres. Conc.	49 x 5 Gal.
Ginn Penta Pres. RTU	50 x 5 Gal.
Poletox	64 x 348 Lbs.
Poletox	100 x 57 Lbs.
WR 340 Conc. E	10 x 400 Lbs.
Woodtreat AA	5 x 40 Lbs.
Timbertreat 625-C	1 x 55 Gal.
Anstrik Sagebrush Green	10 x 5 Gal.
Anstrik 50 Blue Conc.	2 x 5 Gal.
Anstrik 50 Blue Conc.	1 x 55 Gal.
WTC #71 Floc. Agent	11 x 515 Lbs.
Dowicide GST Beads	86 x 50 Lbs.
Super Noxtane 175 x 100 L	196 x 100 Lbs.
Timbertox D-5 RTU	1 x 55 Gal.
Wolman Pre-Stain Conc. Cedar Brown	1 x 55 Gal.

TOLS005076

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Lumberella 33 Clear	2 x 55 Gal.
Beam Sealer KLB	14 x 55 Gal.
Penta Stain #509 Amber	2 x 55 Gal.
Penta Stain #506 Redwood	3 x 5 Gal.
End Sealer Clear	2 x 55 Gal.

### Penta Shipments August Calendar Month--Lbs.

TO	<u>Supplier</u>			WTC	TOT	<u>Aug. Comparison</u>	
	Vulcan	Reichhold	Monsanto			1977	1976
FPD	300000	170920	120173		591093	614485	266379
customers	80000	113075	194963	+28250	416288	621404	328841
WTC	0	120090	42000	-28250	133840	152600	72000
<b>TOTAL</b>	<b>380000</b>	<b>404085</b>	<b>357136</b>	<b>0</b>	<b>1141221</b>	<b>1388489</b>	<b>667220</b>

### Invoicing August Accounting Month--\$

	<u>1978</u>	<u>1977</u>	<u>1976</u>
FPD	251669	288037	171533
Customer Penta	171242	239978	105533
WTC Products	300579	299223	293950
	723490	827238	571016

### II. Raw Materials

#### Penta

Monsanto Inventory 8-31  
 393,000 Lbs - 1000 # Blocks  
 8,000 Lbs. - 2000 # Blocks  
 575,400 Lbs. - 50 # Bags

TOLS005077

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

Reichhold almost completely ran out of stock in mid-month. Recovery to any kind of inventory position will be slow due to present demand for penta.

Vulcan seems to be in very little better position; a bulk shipment to Montgomery was delivered two days late, with poor commercial carrier equipment and inexperienced driver, taking two days to unload. As well, when we (with Reichhold stock to Eastern customers only) could not supply International Paper at Wiggins on time, neither was Vulcan able to better our delivery very much. Consequently, we retained a two truckload order.

### Sodium penta/Super Noxane.

Sodium penta stock, all locations, Sept. 1 at 7600 lbs. Product Super Noxane stock less booked orders is at 13,000 lbs. with expectations of booking another 10,000 lbs. next week. We should sell out in September and October and I trust all customers are prepared for liquid conversion. We understand Dow's import sodium penta is on very strict allocation besides selling \$1.05 lb. FOB Linden, N.J.

### Steel drums/pails

All suppliers have raised prices 6 to 8%, deliveries are slowing and are taking near one month that previously took one week.

### Aliphatic Solvents

Supply short better grades of mineral spirits due to pressure on refineries to provide asphalt cutting stock during peak paving season and ease with which it can be produced versus the mineral spirits. Thus pressure is building again for another increase.

### Co-solvents

Again, due to greater demand, Eastman is delaying shipment of KB-3, B-6 and B-6HB about a month. To date we have not suffered but our B-6HB stock is gone and more material is not expected until the end of September. We have a 15,000 Gal. Woodtox 140 RTU inventory, which should be adequate.

TOLS005078

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### III. Inventory & Expenses

July closing inventory	439,789
August purchases	297,896
Raw materials	253,534
Containers	19,422
Resale products	24,940
(Resale Penta FPD-1408	134,219)
(Resale Penta Customers 1414	135,037)
August material converted to products	181,852
August estimated costs WTC products sold	242,567
August estimated closing inventory	495,118
September estimated closing inventory	600,000
October estimated closing inventory	600,000

### Total WTC estimated plant expenses August

Salaries & Wages (10-11-13-16-50)	11,682*
Employee Benefits (70-90-95-110-113)	3,229*
Travel Expenses (210-215-216-230-232)	402
Office Expense (Incl whse rent 1161)	2,177
Maint. & Repair Labor & Material	1,075
Direct Supplies (-991 Tankcars)	-456
Warehouse & Blend Fee	4,601
Pumps	905
Fuel & Power	357
Indirect Expense	871
Hauling Expense	86
Consulting & Prof svcs (Lab & Traffic)	640
Subscriptions & Donations	25
Depreciation & Amortization	1,811*
Insurance & Taxes (Plant payroll 166)	4,874*
	32,289

\*Estimate

TOLS005079

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

9/12

TO FRANK

### IV Sales Forecast

	<u>September</u>	<u>October</u>	<u>November</u>	<u>DRC</u>
FPD Penta	200,000	185,000	200,000	175
Customer Penta	160,000	140,000	150,000	125
WTC Products	280,000	260,000	240,000	185
	640,000	585,000	590,000	485

Note we have revised our forecast of formulated products upward. There is little doubt at present that September should not be a good month for formulated products and now believe that October and November will show only slight seasonal slumps. We do not anticipate much activity in penta due to a rumored Dow increase, at least thru September, and are not revising our forecast on penta.

### V. Assistance Requirements.

1. Complete whatever scrap penta purchase can be made before a competitor gets the stock.
2. Again, manufacturing continues to lose time because of foam control-Lumbrella, End Spray Concentrates, and Prestain Concentrates.

### VI. St. Louis General Comments

No open AFE's - no expenses.

Medical Surveillance activity - None in August

Plant labor contract finally settled with addition of eye and dental coverage to health & welfare provisions and 35¢ per hour increase, each of next two years; third contract year open for health & welfare & benefit negotiations.

TOLS005080

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-8-

### VII. Valparaiso Mix Plant

Production - 465,000 oxide lbs.  
Shipments - 165,000 oxide lbs. Koppers-Hickson  
              186,000 oxide lbs. Domestic  
Inventory - \$263,184, a \$28,000 reduction from July  
AFE status - To our knowledge no \$ expensed in August. Work commencing  
and in progress will reflect in large September expenses.  
Medical - Tim Hampton finally quit due to reoccurring rash condition  
caused by allergy; medical authorities would not blame Koppers  
and Hampton finally forced into own decision.  
Personnel - Second plant worker Robt. Olsen left Aug. 18 to return to  
College. Chas. Smith hired Aug. 24, in lieu of finding a  
good plant worker; we are still looking for a good plant  
employee but will use Smith until-. New plant & Sales Clerk  
Joann Epple started 8/28; trained 28 & 29 with Pat Coleman.  
Trucking - L. Stewart and unit being used by Conley while Walpo plant  
closed for overhaul. Accident occurred in north Georgia while  
returning empty to Conley; no injuries, but extensive damage  
to other vehicle that crossed median into our unit's lane. We  
understand very minor unit damage.  
General - Plant shutdown Aug. 18 for repairs, one day early due to lack  
of Arsenic Acid from Conley. Six loads of product on hand for  
September business; anticipate Sept. 8 return to production, dumping  
by hand until drum dumper, conveyor, etc. received & installed  
-at best, probably another month before we can try automated  
feed system, in total.

### VIII. Newark Mix Plant

Production - 30,170 oxide lbs.  
Shipments - 48,740 lbs Exterior Wood  
              48,370 lbs Honolulu  
              37,910 lbs Pacific Wood  
Sept. schedule Possibly 5 loads.

TOLS005081

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### IX. Meetings - Travel

1st week August - Valpo (Schultz vacation)

August 9 - Pittsburgh

August 10-Valpo with F. Boge

August 11-St. Louis plant labor negotiations

August 15-Conley with J. Kent, F. Boge

August 21, 22, 28 & 29 Valpo

September 7-8 Valpo

September 14- S. Snyder Employee Benefits Talk

September - Balance open at this writing, but anticipate further Valpo visits.

R. F. Simmons

RFS/pc

TOLS005082

cc: T. A. Beatty  
File Copy  
J. R. Brummett  
P. A. Goydan  
G. A. Schultz  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

Location K-1001

Subject Monthly Report September 1978  
Wood Treating Chemicals Dept.

From R. F. Simmons

Location St. Louis, MO

Date October 3, 1978

### 1. Shipments September Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox 140 RTU	7 x 55 Gal.
Woodtox Preprime Conc.	7 x 55 Gal.
Woodtox Preprime RTU	3 x 55 Gal.
Penta Wood Pres. Conc.	14 x 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSL	21 x 55 Gal.
Liquid Noxtane I	4 x 55 Gal.
Super Noxtane	30 x 50 Lbs.
Dowicide GST Beads	157 x 50 Lb.
Lumbrella 15 Redwood	10 x 53 Gal.
Lumbrella 25 Brown	2 x 55 Gal.
End Spray 400 Green	20 x 5 Gal.
End Spray 400 Yellow	10 x 5 Gal.
End Spray 400 Red	10 x 5 Gal.
Timbertreat 625 Conc.	3 x 55 Gal.
Penta Wood Pres. RTU	5 x 5 Gal.

TOLS005083

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SS1	17 x 55 Gal/
Liquid Noxtane 1	7 x 55 Gal.
End Spray 400 Red Orange	5 x 55 Gal.
End Spray 400 Green	5 x 55 Gal.
End Spray 400 Blue	3 x 55 Gal.
Lumbrella 33 Redwood S	5 x 55 Gal.
Lumbrella 33 Yellow S	1 x 55 Gal.
Lumbrella 33 Yellow S	27 x 3 Gal.
Lumbrella 33 Clear	16 x 55 Gal.

### (4) Newark, California Warehouse

Liquid Noxtane SS1	35 x 55 Gal.
Liquid Noxtane SS1	12 x 345 Gal.
Clear End Sealer	12 x 55 Gal.
Red End Sealer	8 x 55 Gal.
Orange End Sealer	5 x 55 Gal.
Blue End Sealer	1 x 55 Gal.

### (5) Portland, Oregon Blender

Redy Coat Penta Conc.	16 x 55 Gal.
Redy Coat Penta RTU	20 x 55 Gal.
Woodtox Preprime-T-RTU	80 x 55 Gal.
Woodtox Preprime-T-RTU	5993 Gal. Bulk
Timbertox 40 Conc.	1 x 55 Gal.
WR 340 Conc.	6 x 408 Lbs.
Petroset 11	6 x 406 Lbs.

TOLS005084

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### (6) St. Louis, MO Plant

Woodtox Preprime RTU	39732 Gal. Bulk
Woodtox Preprime RTU	14 x 55 Gal.
Woodtox Preprime Conc.	5 x 55 Gal.
Woodtox 140 RTU	5936 Gal. Bulk
Woodtox 140 RTU	15 x 55 Gal.
Woodtox 140 RTU	12 x 55 Gal.
Woodtox 140 Conc.	15 x 55 Gal.
Woodtox 152 RTU	1 x 55 Gal.
Woodtox 152 RTU	5 x 5 Gal.
Woodtox RTU	7 x 5 Gal.
WR 340 Conc.	60 x 400 Lb.
Woodset 310 Conc.	4 x 5 Gal.
WK-60 Solvent	60 x 55 Gal.
Penta Wood Pres. RTU	2 x 5 Gal.
Penta Wood Pres. RTU	7 x 55 Gal.
Penta Wood Pres. Conc.	41 x 55 Gal.
Super Noxtane	205 x 100 Lb.
Ginn Penta Pres. RTU	10 x 55 Gal.
Wood Seal Wax	1 x 426 Lb.
Wood Seal Wax	25 x 40 Lb.
Woodtreat AA	3 x 40 Lb.
Woodtreat AA	198 x 5 Lb. Tubes
Liquid Noxtane SSI	3 x 55 Gal.
Liquid Noxtane I	4 x 55 Gal.
WTC #71	6 x 515 Lb.
Wolman Prestain Conc. Redwood	11 x 55 Gal.
Wolman Prestain Conc. Cedar Brown	1 x 55 Gal.
Wolman Prestain Conc. Cedar Brown	1 x 5 Gal.
Timbertreat 625	15 x 5 Gal.
Timbertreat 625	5 x 55 Gal.
Penta Stain 502	15 x 5 Gal.
Penta Stain 509	1 x 55 Gal.
Penta Stain 508	3 x 5 Gal.
Penta Stain 507	3 x 5 Gal.

TOLS005085

11-6421

6100M 8-77

BZTO104(e)041906

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-4-

Date \_\_\_\_\_

Penta Stain 504	1 x 5 Gal.
Clear End Sealer	5 x 5 Gal.
Clear End Sealer	5 x 55 Gal.
Red End Sealer	4 x 5 Gal.
Blue Anstrik Conc.	4 x 5 Gal.
Lumbrella 33 Yellow S	864 x 3 Gal.
Lumbrella 25 Cherry	65 x 55 Gal.
Lumbrella 33 Clear	5 x 55 Gal.
Lumbrella 15 Redwood	10 x 53 Gal.
Lumbrella 25 Brown	1 x 55 Gal.

### Penta Shipments Sept. Calendar Month-Lbs.

To	Supplier				Sept. Comparison		
	Vulcan	Reichhold	Monsanto	WTC	Total	1977	1976
FPD	339,920	323,890	-----	-----	663,810	546,334	622,256
Cust.	-----	123,120	531,175	54,350	708,645	271,748	421,696
WTC	-----	45,305	42,000	-----	87,305	139,000	203,726
Total	339,920	492,315	573,175	54,350	1459,760	957,082	1,248,078

### Invoicing Sept. Accounting Month-\$

	1978	1977	1976
FPD	169,985	244,571	168,254
Cust. Penta	206,430	144,207	129,398
WTC Products	238,776	238,724	296,637
	\$15,191	627,502	594,289

### II. Raw Materials

#### Penta

Monsanto inventory 9/30-Purchased as discussed.

251,900 Bags

84,00 # Blocks

Blocks reserved for Escambia will call 10/3 & 10.

Bag loads committed to Lockhart, Meredith, & Denver to date.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-5-

Date \_\_\_\_\_

Reichhold and Vulcan both closed Sept. with no inventory. There are a few October orders to be at old pricing. Both suppliers holding firm on refusing discount on bulk deliveries to Koppers plants & Reichhold as yet refusing to freight equalize bulk trucks with 80M rail bag rates. Other raw material co. comments in August all good for September.

### III. Inventory & Expenses

August Closing Inventory	509,558
September Purchases	172,456
Raw Materials	157,967
Containers	14,083
Resale Products	406
(Resale Penta FPD-1408 157,484)	
(Resale Penta Customers 1414 113,864)	
September Material Converted to Products	159,986
September Estimated Costs WTC Products Sold	200,333
September Estimated Closing Inventory	481,681
October Estimated Closing Inventory	540,000
November Estimated Closing Inventory	550,000

### Total WTC Estimated Plant Expenses September

Salaries & Wages (10-11-13-16-50)	14,473*	12
Employee Benefits (70-90-95-110-113)	3,048*	3
Travel Expenses (210-215-216-230-232)	136	
Office Expense (Includes Warehouse rent 1248)	2,098	2
Maint. & Repair Labor & Material	1,835	1½
Direct Supplies (220 Tankcars)	1,054	1
Warehouse & Blend Fee	6,210	.7
Pumps	1,390	1
Fuel & Power	2,713	2
Indirect Expense	687	1
Consulting (Traffic 175-Lab 475*)	650	
Donations	8	
Depreciation & Amortization	1,811*	
Insurance & Taxes	4,874*	
	40,987	

\*Estimate (Expenses up Approx. 25% due to 5 wk. accounting month vs. normal 4 wk. month and more than normal outside blending resulting in larger blend fees.)

TOLS005087

BZTO104(e)041908

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### IV. Sales Forecast

	Oct	Nov.	Dec.
FPD Penta	310,000	180,000	175,000
Customer Penta	330,000	160,000	175,000
WTC Products	250,000	200,000	200,000
	890,000	540,000	550,000

### V. Assistance Requirements

Need analysis air monitoring samples submitted Monroeville twice in September for Newark; also awaiting some sampling results for Valpo from last two weeks September.

### VI. St. Louis General Comments

No open AFE's - No expenses  
No expected capital expenses 3 months  
No medical surveillance activity in September.

### VII. Valparaiso Mix Plant

Production - 124,000 oxide lbs. domestic

93,000 oxide lbs. Koppers Hickson

Shipments - 144,830 oxide lbs. domestic

164,020 oxide lbs. Koppers Hickson

40,000 lbs. Non-Com

Inventory - \$255,850

Medical - Charles Smith developing rash on hands and is under doctor care.

Personnel - Personnel training of #1 plant worker, Greg Kent, under way

2 weeks. Smith to be released as soon as rash cleared.

Trucking - Separate activity report for month submitted. Rig out of service two days during month, one for trailer repairs, one for tractor tuneup and servicing.

General - Work under way on drum dumper; when unit completed, it along with conveyor, scrubber and drum wash will proceed. Estimated Oct. 23 when insulation begun and will be accomplished with little or no down time.

Arsenic standards met and Valpo will operate without regulated areas.

Cleanliness standards will not be relaxed however and all standard health precautions will continue in force. Schultz has requested Nov. 20 week vacation.

TOLS005088

N. 200M 8-77

BZTO104(e)041909

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-7-

Date \_\_\_\_\_

### VIII. Newark Mix Plant

Production 148,000 Oxide Lbs.

Shipments 187,160 Lbs. To: Honolulu

Oroville

Thunderbolt

Selma

October Schedule: Pacific Wood  
Saskatchewan  
Honolulu  
Pacific Wood  
Kellogg  
Koppers-Ontario  
Exterior Wood  
San Diego (half load)  
Pacific Wood

General - Air monitoring to date indicates that regulated area will have to be set up.

### IX. Meetings - Travel.

Sept 7-8 Valpo Plant Modification

11 Valpo Air monitoring

27 Valpo Air monitoring

13 Human Relation show - Steve Snyder at St. Louis

Oct. 5 St. Louis Plant Contract Signing

9-10 Newark arsenic standard discussion & WTC operation discussion.

11-13 Vacation

23-24 Vacation

TOLS005089

cc: T. A. Beatty  
File Copy  
J. R. Brummett  
G. A. Schultz  
P. A. Goydan  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

Location K-1001

Subject Monthly Report October 1978  
Wood Treating Chemicals Dept.

From R. F. Simmons

Location St. Louis, MO

Date \_\_\_\_\_

### 1. Shipments October Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	2 x 55 Gal.
Woodtox 140 RTU	3 x 55 Gal.
Woodtox S Conc.	9 x 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	3 x 55 Gal.
Liquid Noxtane I	3 x 55 Gal.
Timbertreat 625 Conc.	3 x 55 Gal.
Dowicide GST Beads	117 x 50 Lb.
KLB Beam Sealer	10 x 55 Gal.
Lumbrella 33 Redwood S	5 x 55 Gal.
Lumbrella 33 Redwood S	189 x 3 Gal.
Lumbrella 25 Brown	10 x 55 Gal.
End Spray Green	20 x 5 Gal.
End Spray Yellow	10 x 5 Gal.
End Spray Red	10 x 5 Gal.

TOLS005090

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-2-

Date \_\_\_\_\_

### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	5 x 55 Gal.
Woodtox Preprime Conc.	1 x 55 Gal.
Timbertreat 625 Conc.	3 x 55 Gal.
Lumbrella 33 Clear	9 x 55 Gal.
Lumbrella 33 Yellow S	2 x 55 Gal.
End Spray Orange	4 x 55 Gal.
Dowicide GST Beads	1 x 100 Lb.
Dowicide GST Beads	20 x 50 Lb.

### (4) Newark, California Warehouse

Liquid Noxtane SS1	140 x 55 Gal.
Liquid Noxtane SS1	15 x 345 Gal.
Liquid Azide	4 x 55 Gal.
End Sealer Clear	3 x 345 Gal.
End Sealer Clear	2 x 55 Gal.
End Sealer Orange	6 x 55 Gal.
J-H Pallets	10 Each

### (5) Portland, Oregon Blender

Redy Coat Penta 455 RTU	49 x 55 Gal.
Redy Coat Penta Conc.	56 x 55 Gal.
Timbertox 40 Conc.	2 x 55 Gal.
Woodtox 140-T-Conc.	2 x 55 Gal.
Woodtox 140 RTU	40 x 55 Gal.
Woodtox Preprime-T-RTU	80 x 55 Gal.
Woodtox Preprime-T-RTU	12647 Gal. Bulk
WR 340 Conc.	36 x 408 Lb.

TOLS005091

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-3-

### (6) St. Louis, MO Plant

Woodtox Preprime RTU	19308 Gal. Bulk
Woodtox Preprime RTU	22 x 55 Gal.
Woodtox Preprime Conc.	9 x 55 Gal.
Woodtox RTU II	164 x 5 Gal.
Woodtox RTU	57 x 55 Gal.
Woodtox 140 Conc.	36 x 55 Gal.
Woodtox 140 RTU	2 x 55 Gal/
Woodtox 152 RTU	10 x 5 Gal.
Penta Wood Pres. Conc.	23 x 55 gal.
Penta Wood Pres. RTU	11 x 55 Gal.
Penta Wood Pres. RTU	27 x 5 Gal.
Ginn Penta Pres. RTU	50 x 5 Gal.
Wood Seal Wax	9 x 426 Lb.
Woodtreat AA	8 x 40 Lb.
Timbertox D-5 RTU	146 x 55 Gal.
Timbertreat 625 Conc.	4 x 5 Gal.
Timbertreat 625 Conc.	15 x 55 Gal.
WTC Floc. Agent #74	1 x 460 Lb.
WTC Floc. Agent #71	5 x 515 Lb.
WR 340 Conc.	10 x 400 Lb.
Pole Life F TF	10 x 45 Lb.
Beam Sealer KLB	14 x 55 Gal.
Wolman Pre-Stain Cedar Brown	2 x 55 Gal.
Wolman Pre-Stain Redwood	4 x 55 Gal.
Penta Stain #502	12 x 5 Gal.
Penta Stain #502	1 x 55 Gal.
Penta Stain # 506	1 x 5 Gal.
Penta Stain #509	2 x 55 Gal.

TOLS005092

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location\_\_\_\_\_

Location\_\_\_\_\_

Subject\_\_\_\_\_

-4-

Date \_\_\_\_\_

Super Nontane	111 x 100 Lb.
Liquid Noxtane	6 x 55 Gal.
Anstrik Blue Conc.	3 x 6 Gal.
Lumbrella 33 Yellow H	1 x 55 Gal.
End Sealer Green	10 x 5 Gal.
End Sealer Clear	6 x 5 Gal.
End Sealer Clear	3 x 55 Gal.
Poly Kraft Paper Black	1 Roll
Poly Kraft Paper Brown/brown	1 Roll

### Penta Shipments October Calendar Month Lbs.

to	Supplier			<u>Total</u>	Oct. Comparison	
	<u>Vulcan</u>	<u>Reichhold</u>	<u>WTC</u>		<u>1977</u>	<u>1976</u>
FPD	126,160	358,740	39,900	524,800	420800	537223
Cust	160,000	83,195	206513 + 29250 ltl	478,958	126832	316747
WTC	-----	60,000	-----	60,000	23900	69000
Total	286,160	501,935	275,663	1063,758	571,532	922,970

### Invoicing October Accounting Month \$

	1978	1977	1976
FPD Penta	336,008	139,488	236,865
Cust Penta	320,173	83,979	252,106
WTC Products	208,610	182,883	258,406
CCA	52,896		
	917,687	406,350	747,377

TOLS005093

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-5-

Date \_\_\_\_\_

### II. Raw Materials

Beyond the October 1 Penta increase, no significant material increases this month.

As of the end of October, 85,000 Lbs. of Penta remained in our stock in East St. Louis, all committed to early November shipment.

Both Reichhold and Vulcan remain in sold out position, particularly block Penta is in short supply.

### III. Inventory and Expenses

September Closing Inventory	491,569
September Purchases	295,775
Raw Materials	281,233
Containers	11,928
Resale Products	2,614
(Resale Penta FPD 1408 \$217,703)	
(Resale Penta Customers 1414 \$228,693)	
October Material Converted to Products	136,315
October Estimated Costs WTC Products Sold	174,903
October Estimated Closing Inventory	612,441
November Estimated Closing Inventory	600,000
December Estimated Closing Inventory	600,000

TOLS005094

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-6-

Date \_\_\_\_\_

### Total WTC Estimated Plant Expenses October

Salaries & Wages (10-11-13-16-50)	11489*
Employee Benefits(70-90-95-110-113)	3352*
Travel Expenses (210-215-216-230-232)	291
Office Expense (Includes Warehouse Rent \$1177)	2429
Maint. & Repair Labor & Material	1637
Direct Supplies (\$481 Tankcars)	767
Warehouse & Blend Fee	2006
Pumps	63
Fuel & Power	411
Indirect Expense	2012
Consulting (Traffic \$175--Lab\$500*)	675
Depreciation & Amortization	1811*
Insurance & Taxes	3800*
	30743

\*Estimate

Sa

### IV. Sales Forecast- WTC

	<u>Nov.</u>	<u>Dec.</u>	<u>Jan.</u>
FPD PENTA	200,000	200,000	175,000
Cust Penta	100,000	150,000	175,000
WTC Products	200,000	200,000	175,000
CCA-C	40,000	40,000	40,000
	540,000	590,000	565,000

### V. Assistance Requirements

Still Awaiting some air monitoring results from 9/12-15 samples from Newark.

Penta Block requirements by 2nd quarter 1979 will exceed production..

TOLS005095

# KOPPERS

## Interoffice Correspondence

Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

- 7 -

Date \_\_\_\_\_

### VI. St. Louis General Comments

No open AFE's-no expenses

No expected capital expense next 3 months.

Medical surveillance-- Brock had follow-up visit from his knee surgery;  
Progress satisfactory.

Plant employee annual recheck began this month  
with 1 man.

#### Plant Employee Status

St. Louis-4 salaried office

1 office Temporary hourly

5 Plant hourly

1 Plant Temporary (left 11/3)

Valpo--- 1 Plant hourly

1 Truck Driver

1 Plant/Sales office clerk

### VII. Valparaiso Mix Plant

Production - 279,000 Oxide Lbs. - Domestic

186,000 Oxide Lbs. - Koppers-Hickson

Shipments - 245,620 Oxide Lbs - Domestic

124,245 Oxide Lbs. - Koppers-Hickson

Inventory---\$245,530

Medical----Chas. Smith rash cleared and has left our employ.

Trucking---Separate report 11/6

Operation--Under separate cover yesterday anticipated

#### Anticipated Orders

Nov. 7 Domestic 8 K-H

Dec. 2 Domestic 8 K-H

Jan. 2 Domestic 8 K-H

TOLS005096

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-8-

Date \_\_\_\_\_

### VIII. Newark Mix Plant

Production---180955 Oxide Lbs.

Shipments----190060 Oxide Lbs.

#### Rel. #36 Pacific Wood Treating

37 Saskatchewan Forest

38 Honolulu

39 Kellogg

40 Pacific Wood Pres.

41 Koppers-Ontario

42 Exterior Wood

43 San Diego

44 Pacific Wood Treating

#### Nov. Schedule

45 Honolulu

46 Honolulu

47 Selma

48 Koppers-Ontario

49 Pacific Wood Treating

You have read our report on arsenic monitoring. We are awaiting reply  
and/or comment from Jim Black & Cal-Osha.

### IX. Meetings--Travel.

Oct. 9-10 Newark

11-13 Vacation

25 R. Stefanski at St. Louis

31 Valpo

During October visits from inspectors of Industrial Risk Insurers--

St. Louis City Air Pollution Control

St. Louis Fire Marshall's Office

----All No Problems

November

17 Valpo for inventory

TOLS005097

cc: T. A. Beatty  
File Copy  
J. R. Brummett  
G. A. Schultz  
P. A. Goydan  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

Location K-1001

Subject Monthly Report November 1978  
Wood Treating Chemicals Dept.

From R. F. Simmons

Location St. Louis, MO

Date \_\_\_\_\_

### I. Shipments November Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox Preprime RTU	2 x 55 Gal.
Woodtox Preprime Conc.	2 x 55 Gal.
Woodtox 140 RTU	8 x 55 Gal.
Penta Wood Pres. Conc.	14 x 55 Gal.
Penta Wood Pres. RTU	5 x 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Liquid Noxtane 1	2 x 55 Gal.
Liquid Noxtane SS1	8 x 55 Gal.
Timbertreat 625 Conc.	2 x 55 Gal.
Dowicide GST Beads	2 x 50 Lbs.
End Spray 400 Green	2 x 55 Gal.
Lumbrella 33 Redwood Soft	23 x 55 Gal.
Lumbrella 33 Redwood Hard	27 x 3 Gal.
Lumbrella 15 Redwood	4 x 55 Gal.
Lumbrella 33 Redwood	162 x 4 Gal.
Lumbrella 15 Yellow	16 x 53 Gal.

#### (3) Atlanta, Georgia Warehouse

Liquid Noxtane 1	9 x 55 Gal.
Poletox	20 x 57 Lbs.
WfC Floc. Agent #71	3 x 515 Lbs.
Lumbrella 33 Clear	10 x 55 Gal.
Lumbrella 33 Yellow Soft	2 x 55 Gal.
Lumbrella 33 Redwood Soft	19 x 55 Gal.
End Spray 400 Green	5 x 55 Gal.
End Spray 400 Blue	4 x 55 Gal.
End Spray 400 Red-Orange	2 x 55 Gal.

TOLS005098

BZTO104(e)041919

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_ -2-

Date \_\_\_\_\_

### (4) Newark, California Warehouse

Liquid Noxtane SS1	10 x 345 Gal.
Liquid Noxtane SS1	86 x 55 Gal.
End Sealer Red	9 x 55 Gal.
End Sealer Clear	2 x 55 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime-T-RTU	10643 Gal. Bulk
Woodtox X 140 RTU	1006 Gal. Bulk
Woodtox 140-T-Conc.	70 x 55 Gal.
Redy Coat Penta 455 RTU	28 x 55 Gal.
Timbertox 40 Conc.	1848 Gal. Bulk
Timbertox 40 Conc.	1 x 55 gal.
Petroset II	6 x 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime X RTU	42437 Gal. Bulk
Woodtox Preprime RTU	2 x 55 Gal.
Woodtox Preprime Conc.	4014 Gal. Bulk
Woodtox Preprime Conc.	30 x 55 Gal.
Woodtox 140 RTU	3000 Gal. Bulk
Woodtox 140 RTU	1 x 55 Gal.
Woodtox RTU	141 x 5 Gal.
Woodtox 152 RTU	10 x 5 Gal.
Penta Wood Pres. Conc.	1 x 5 Gal.
Penta Wood Pres. Conc.	3 x 55 Gal.
Penta Wood Pres. RTU	28 x 55 Gal.
Penta Wood Pres. RTU	4 x 5 Gal.
Ginnco Penta Pres. RTU	50 x 5 Gal.
Liquid Noxtane 1	3 x 55 Gal.
Liquid Noxtane SS1	6 x 55 Gal.

TOLS005099

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

-3-

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

Timbertreat 625 Conc.  
Timbertreat 625 Conc.  
WTC Floc. Agent #71  
WTC Floc. Agent #74  
Pole Tax  
Wood Seal Wax  
Woodset 310 Conc.  
Beam Sealer KLB  
Lumbrella 25 Red/Brown  
Penta Stain 502  
Penta Stain 509  
End Sealer Green  
End Sealer Red

9 x 55 Gal.  
1 x 5 Gal.  
1 x 515 Lbs.  
1 x 460 Lbs.  
95 x 57 Lbs.  
1 x 426 Lbs.  
1 x 55 Gal.  
24 x 55 Gal.  
2 x 55 Gal.  
1 x 5 Gal.  
1 x 55 Gal.  
10 x 5 Gal.  
1 x 55 Gal/

### Penta Shipments November Calendar Month-Lbs.

#### Supplier

TO	Vulcan	Reichhold	WTC	TOTAL	Nov. Comparison	
					1977	1976
FPD	42300	295,035	39,900	377,235	119,740	537,223
Cust.	-----	-----	96,700	96,700	435,342	316,747
WTC	-----	-----	-----	-----	169,242	69,000
TOTAL	42,300	295,035	136,600	473,935	724,324	922,970

TOLS005100

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-4-

Date \_\_\_\_\_

### Invoicing November Accounting Month--\$

	<u>1978</u>	<u>1977</u>	<u>1976</u>
FPD Penta	189,895	218,940	198,706
Cust. Penta	72,741	169,798	116,437
WTC Products	196,316	218,368	207,732
CCA *	52,501		
Net	511,150	604,588	522,875

#### \*Detail:

	<u>Lbs.</u>	<u>\$</u>	<u>Location</u>
Northern Crossarms	5250	4725.00	Valpo
Less sludge returned	3550	3195.00	
	1700	1530.00	
Pacific Wood Treating Co.	24295	24295.00	Newark
Quality Forest Products Inc.	20850	18765.00	Conley
Woods Run Forest Products	5240	4716.00	Valpo
Less sludge returned	2252	2026.80	
	2988	2689.20	

## II. Materials.

Penta, in all forms, remains in very short supply from both suppliers; we are living on a day-to-day basis with orders and spending a lot of time staying on top of each order's delivery.

Stock of Dow EC-7 prills are finally exhausted we are production trialing batches of LN-SS1 St. Louis week of December 4 and Newark week of December 11 made with technical penta-technical tetra and with new filtration.

Shell has announced a .04/gal. increase for January 1 on all mineral spirits; other suppliers are sure to follow.

TOLS005101

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

-5-

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

### III. INVENTORY & EXPENSES

October closing inventory (estimated-no report)	532717
November Purchases	95358
Raw Materials	85,306
Containers	8,512
Re Resale Products	1,540
(resale Penta FPD 1408 \$184,547)	
(resale Penta Customers 1414 \$73,982)	
November material converted to Products	199,708
November estimated costs WTC products sold	159,016
November estimated closing inventory	469,059
December estimated closing inventory	550,000
January estimated closing inventory	600,000

### TOTAL WTC ESTIMATED PLANT EXPENSES NOVEMBER

Salaries & Wages (10-11-13-16-50)	12,667*
Employee Benefits (70-90-95-110-113)	4,191*
Travel Expenses (210-215-216-230-232)	46
Office Expense (includes Warehouse Rent \$1284)	2,369
Maint. & Repair Labor & Material	1,567
Direct Supplies (\$ (1150) tankcars)	(879)
Warehouse & Blend Fee	1,882
Fuel & Power	501
Indirect Expense	828
Consulting (Lab 2 months)	720
Donations	242
Subscription & Dues	227
Depreciation and Amortization	1,811*
Insurance & Taxes	3,800*
	29,972

\* Estimate

TOLS005102

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-6-

Date \_\_\_\_\_

### IV. SALES FORECAST - WTC

	<u>Dec.</u>	<u>Jan.</u>	<u>Feb.</u>
FPD Penta	265,000	200,000	175,000
Customer Penta	35,000	100,000	125,000
WTC Products	140,000	160,000	200,000
KCCA-C	20,000	20,000	40,000
	460,000	590,000	540,000
	407	480	

### V. ST. LOUIS GENERAL COMMENTS

No open AFE's - No capital expenses.

Medical surveillance - No Nov. Activity

Employee status - Nov. 1978 1977

Office salaried	4	5
Plant Hourly	5	6
Office(temp)	1	0

Inventory all WTC December closing.

### VII. VALPARAISO MIX PLANT

Production-----	279,000	Oxide Lb.	Domestic
	93,000	"	K-H
Shipments-----	195,135	"	Domestic
	102,080	"	K-H
Inventory -----	\$ 292,616		
Medical-----	No Activity		
Operation -----	Anticipated Sales		
		<u>Dec.</u>	<u>Jan.</u>
		140,000	100,000
		60,000	60,000
		100	100,000

@ 1% OXIDE LB

TOLS005103

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

-7-

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

### VIII. NEWARK MIX PLANT

**PRODUCTION 119,104 Oxide Lbs.  
SHIPMENTS 145,455**

Rele 45 Honolulu  
46 Honolulu  
47 Selma  
48 K-Ontario  
49 Pacific Wood Treating  
50 Pacific Wood Preserving  
51 Honolulu  
52 K-Ontario  
53 Honolulu  
No further releases in hand,  
anticipate four releases each  
month total.

Dec. Schedule  
Jan. Schedule

### IX. MEETINGS-TRAVEL

Nov. 17--Valpo inventory  
Dec. 7-- Valpo (tentative date-for sure during week)  
Dec. 12-13 ---Newark

TOLS005104

cc: T. A. Beatty  
File Copy  
J. R. Brummett  
G. A. Schultz  
P. A. Goydan  
J. M. Montgomery  
J. D. Palmer

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, MO

Subject Monthly Report December 1978  
Wood Treating Chemicals Dept.

Date \_\_\_\_\_

### I. Shipments December Accounting Month

#### (1) Camden, New Jersey Warehouse

Woodtox PrePrime RTU	4 x 55 Gal.
Woodtox PrePrime Conc.	2 x 55 Gal.
Woodtox 140 RTU	6 x 55 Gal.
Penta Wood Pres. Conc.	4 x 55 Gal.

#### (2) Enfield, North Carolina Warehouse

Beam Sealer KLB	10 x 55 Gal.
Lumbrella 33 Redwood S	6 x 55 Gal.
Liquid Noxtane 1	2 x 55 Gal.
Liquid Noxtane SS1	2 x 55 Gal.
Super Noxtane	10 x 100 Lb.
Super Noxtane	61 x 50 Lb.
Lumbrella 33 Redwood S	162 x 3 Gal.
Lumbrella 33 Yellow	54 x 3 Gal.
Lumbrella 25 Brown	10 x 55 Gal.
Lumbrella 15 Redwood	4 x 53 Gal.

#### (3) Atlanta, Georgia Warehouse

End Spray 400 Green	2 x 55 Gal.
End Spray 400 Red	1 x 55 Gal.
End Spray 400 Red Orange	3 x 55 Gal.
Lumber Coat Conc. Yellow	9 x 55 Gal.
Lumbrella 33 Clear	9 x 55 Gal.
Liquid Noxtane 1	9 x 55 Gal.
Pole Tox	20 x 57 Lbs.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-2-

Date \_\_\_\_\_

### (4) Newark, California Warehouse

Orange End Sealer	4 x 55 Gal.
Blue End Sealer	1 x 55 Gal.
Clear End Sealer	3 x 55 Gal.
Clear End Sealer	5 x 300 Tote
Liquid Noxtane SS1	6 x 55 Gal.
Liquid Noxtane SS1	1 x 345 Tote

### (5) Portland, Oregon Blender

JWoodtox 140-T-Conc.	145 x 55 Gal.
Woodtox Preprime-T-RTU	5812 Gal. Bulk
Woodtox Preprime-T-RTU	6 x 55 Gal.
Redy Coat Penta	14 x 55 Gal.

### (6) St. Louis, MO Plant

Woodtox Preprime RTU	20368 Gal. Bulk
Woodtox Preprime RTU	5 x 55 Gal.
Woodtox Preprime Conc.	27 x 55 Gal.
Woodtox RTU	2 x 5 Gal.
Woodtox 140 RTU	8024 Gal. Bulk
Woodtox 140 RTU	2 x 55 Gal.
Woodtox 140 Conc.	80 x 55 Gal.
Penta Wood Pres. RTU	7 x 55 Gal.
Penta Wood Pres. RTU	3 x 55 Gal.
Penta Wood Pres. Conc.	31 x 5 Gal.
Penta Wood Pres. Conc.	31 x 55 Gal.
Penta Wood Pres. Conc.	4221 Gal. Bulk
Timbertreat 625 Conc.	1 x 55 Gal.
Liquid Noxtane I	1 x 55 Gal.
KLB Beam Sealer	2 x 55 Gal.
Anstrick Blue Conc.	2 x 5 Gal.
Lumbrella 33 Yellow S	864 x 3 Gal.
Penta Stain #502	1 x 55 Gal.

TOLS005106

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-3-

Date \_\_\_\_\_

Penta Stain #509	2 x 55 Gal.
Wolmann Prestain Redwood C	1 x 5 Gal.
Wolmann Prestain Redwood C	7 x 55 Gal.
WTC Floc. Agent #71	11 x 515 Lb.
Pole Life TF	6 x 45 Lbs.
End Sealer Clear	1 x 55 Gal.
End Sealer Green	20 x 5 Gal.
End Sealer Red	1 x 55 Gal.
End Sealer Red	1 x 25 Gal.
B Wood Preservative	1 x 5 Gal.

### PENTA SHIPMENTS DECEMBER CALENDAR MONTH

To	Supplier				Dec. Comparison		
	Vulcan	Reichhold	Dow	WTC	Total	1977	1976
FPD	221040	179915	86544	----	487499	359072	278164
Cust.	-----	114460	-----	45150	159610	244943	372612
WTC	40000	5250	-----	-----	45250	42000	-6,300
Total	261040	299625	86544	45150	692359	646015	644476

Invoicing December Accounting Month		
	1978	1977
FPD Penta	271,348	155,338
Cust. Penta	44,624	140,014
WTC Products	149,902	172,492
CCA	0	-----
Total	465,874	454,689
		503,877

TOLS005107

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-4-

Date \_\_\_\_\_

### II. Materials

Penta--Each shipment presents a new supply and delivery problem.

Vulcan and Reichhold inventory at all locations still at 0.

First load Dow blocks received Montgomery in good order;  
first mixing scheduled for Jan. 5.

Mineral Spirits -- As projected last month, between increases 1/1 and  
1/15 raises will approximate .04 to .06 per gallon depending on  
grade and availability both at St. Louis and Portland.

### III. Inventory and Expenses

Nov. closing inventory	639,658
Dec. Purchases	100,608
Raw material 87019	
Containers 7975	
Resale 5614	
Resale Penta(1408)( 188120)	
Resale Penta (1414) (53321)	
Dec. Material converted to products	130,548
Dec. Estimated cost WTC products sold	116,924
Dec. estimated closing inventory	623,342
Jan. estimated closing inventory	650,000
Feb. estimated closing inventory	625,000
March estimated closing inventory	600,000

Dec. closing physical inventory counted and now being costed for  
January 20 completion.

TOLS005108

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

- - - 5 -

Date \_\_\_\_\_

### WTC December Estimated expenses

Salaries & Wages (10-11-12-13-16-50)	12665
Employee Benefits (70-90-95-110-113) (includes 2 wks. supplemental payroll)	6897*
Travel expenses (210-215-216-230-232)	320
Office expenses (incl. warehouse rent-1234)	2386
Maint. and repair material	1238
Direct Supplies	744
Warehouse and Blend Fee and Freight	4804
Fuel and Power	265
Indirect Expense	1252
Consulting	763
Donations & Subscriptions	93
Depreciation & Amortization	1811*
Insurance & Taxes	4500*
	37738

\*Estimate

### IV. Sales Forecast

	<u>January</u>	<u>February</u>	<u>March</u>
FPD Penta	150,000	175,000	200,000
Cust. Penta	110,000	125,000	150,000
WTC Products	160,000	159,000	200,000
KCCA-C	0	0	40,000
	410,000	450,000	590,000

### V. General Comments

No open AFE's -- No Capital expenses

Medical Surveillance--No Activity

Employee Status:	<u>1978</u>	<u>1977</u>
Salaried	4	5
Plant Hourly	5	6
Office (temp.)	1	0

TOLS005109

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-6-

Date \_\_\_\_\_

Aetna insurance inspection  
 City of St. Louis Wts. & Measures inspection  
 MSD sever monitoring  
 -- All No Problems.

### VI. Valparaiso Mix Plant

	Produced	Shipped (oxide Lbs.)
U. S.	93,000	123,415
Koppers-Hickson	<u>186,000</u>	<u>183,735</u>
	279,000	307,150

Inventory \$333,858

Medical - No Activity

Production Schedule - Oxide Lbs.

	Jan.	Feb.	March
U. S.	210,000	120,000	180,000
Koppers-Hickson	60,000	90,000	120,000

For 40502836

Expected Jan. Shipments - Oxide Lbs.

140,000 U.S. (100,000 firm 40,000 anticipated)	8736
80,000 Koppers-Hickson	<u>2400</u>

Personnel:	1978	1977	
Salaried	2	2	11136
Hourly	1	0	
Trucking	<u>1</u>	0	
	4	2	

Capital Expenses--Held in Act. 3110 to date \$129,000  
 expected completion by Jan. 19.

No INVENTORY FOR K-H  
 OF HQ. ACTD

TOLS005110

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

-7-

Date \_\_\_\_\_

### VII. Newark Mix Plant.

Produced  
119,523

Shipped  
97,530

(oxide lbs.)  
Honolulu  
K-Ontario  
Exterior Wood  
Selma

Inventory \$152,656

(\$80537 chromic acid)

Expected Jan. Shipments

K-Oroville  
Thunderbolt  
2-Honolulu (Campbell)  
Honolulu-Mani  
Honolulu-Hale Kauai

### VIII. Meetings & Travel

Dec. 18 - J. Hite and P. Goydan at St. Louis

Dec. 20 - St. Louis Airport - Dow personnel

January tentative schedule

10 - Valparaiso

24 & 25 Valparaiso

29 & 30 Newark

TOLS005111

cc: Charlene Josey  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report January 1979

From R. F. Simmons  
Location St. Louis, Mo.  
Date February 2, 1979

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments January Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime RTU                    11 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	1 X 55 Gal.
Lumbrella 25 Brown	2 X 55 Gal.
Lumbrella 33 Redwood S	8 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Green End Spray 400	26 X 5 Gal.
Yellow End Spray 400	10 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	20 X 55 Gal.
Lumbrella 33 Redwood S	15 X 55 Gal.
Red Orange End Spray 400	7 X 55 Gal.
Red End Spray 400	2 X 55 Gal.
Liquid Noxtane SSI	2 X 55 Gal.
Liquid Noxtane I	1 X 55 Gal.
Poletox	5 X 57 Lbs.

##### (4) Newark, California Warehouse

Liquid Noxtane SSI	6 X 55 Gal.
Red End Sealer	7 X 55 Gal.

TOLS005112

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (5) Portland, Oregon Blender

Woodtox 140 T RTU	3022 Gal. Bulk
Woodtox 140 T RTU	60 X 55 Gal.
Woodtox Preprime RTU	1491 Gal. Bulk
Woodtox Preprime RTU	185 X 55 Gal.
WR 340 Conc.	41 X 408 Lbs.
Petroset II	6 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	36220 Gal. Bulk
Woodtox Preprime RTU	15 X 55 Gal.
Woodtox RTU	1 X 55 Gal.
Woodtox 140 Conc.	15 X 55 Gal.
Woodtox 140 RTU	3874 Gal. Bulk
Woodtox 152 RTU	6029 Gal. Bulk
Woodtox 152 RTU	40 X 5 Gal.
Woodtox Preprime Conc.	10 X 5 Gal.
Penta Wood Pres. Conc	5 X 55 Gal.
Penta Wood Pres RTU	6 X 55 Gal.
Wolman Prestain Redwood Conc	11 X 55 Gal.
Wolman Prestain Cedar Brown Conc	5 X 5 Gal.
Tritox	11 X 57 Lbs.
Poletox	16 X 348 Lbs.
Pole Life TF	10 X 45 Lbs.
Timbertreat 625	1 X 55 Gal.
Liquid Noxtane I	2 X 55 Gal.
Lumbrella 15 Redwood	6 X 53 Gal.
WTC #71	4 X 515 Lbs.
WTC #71	2 X 40 Lbs.
KLB Beam Sealer	12 X 55 Gal.
Green End Sealer	10 X 5 Gal.
Clear End Sealer	1 X 5 Gal.
Penta Stain #502	1 X 5 Gal.
Penta Stain #509	3 X 55 Gal.

TOLS005113

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

### Penta Shipments January Calendar Month (Lbs.)

To	Supplier					January Comparison		
	Vulcan	Reichhold	Dow	Monsanto	WTC	Total	1978	1977
FPD	202200	130010	0	30926	0	363136	260927	395335
Cast	40000	88919	0	0	46200	175119	187500	301893
WTC	0	80500	0	106026	0	186526	0	70700
Total	242200	299429	0	136952	46200	724781	448427	767928

### Invoicing (\$) January Accounting Month

	1979	1978	1977
FPD Penta	148,593	142,870	176,297
Customer Penta	113,433	49,785	102,211
WTC Products	125,850	131,328	170,369
	387,876	323,983	448,877

\* No CCA for January

### II Materials

Penta - Our comment last month about each shipment presenting a new supply and delivery problem was only the beginning. We can add Dow to the list of suppliers with 0 inventory; it seems as they went into a plant shutdown with 1,000,000 + Lbs inventory, but didn't anticipate our few orders (120,000#) quickly enough, and ran out before they could get the plant started up again. We continue to just barely meet needs utilizing all sources as available. Anticipated spring increase of orders will bring chaos.

Solvents - Any feedstock that could be channeled to gasoline continues to raise in cost, consequently all aliphatics and aromatics are too, including our mineral spirits as reported last month. More increases will follow, timing dependent on availability & OPRC pricing of crude primarily.

TOLS005114

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

Steel Containers - Suppliers are again announcing 4 to 5% increases, the 4th increase in 12 months, a basic tight head 55 gallon drum will now cost 30¢ per container gallon; specialty drums, such as agitators for Lumbrella and Prestain will approximate 35¢ per gallon container cost.

### III Inventory & Expenses

At Year end, excluding accumulated reserve for 6 months of \$5280, the WTC operation experienced a \$4091 total inventory gain; there are \$70,000+ differences between raw material to finished goods conversion, however, being investigated.

December closing adjusted inventory (physical)	\$656,987
January Purchases	92,784
Raw Material	81744
Containers	8349
Resale	2691
Penta (1408)	150221
Penta (1414)	59235
January material converted to products	82,563
January estimated cast products sold	92,248
January 1979 estimated closing inventory	657,523
February 1979 estimated closing inventory	625,000
March 1979 estimated closing inventory	600,000
April 1979 estimated closing inventory	650,000

See addendum for Jan. expenses and anticipated Feb. expenses.

### IV Sales Forecast

	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>
FPD Penta	250,000	175,000	200,000
Customer Penta	150,000	100,000	125,000
WTC Products	125,000	150,000	200,000
K-CCA-C	40,000	20,000	40,000
	<u>565,000</u>	<u>445,000</u>	<u>565,000</u>

TOLS005115

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

- - - - 5 -

### V General Comments

No open AFE's - No capital expenses  
Medical Surveillance - 1 plant worker for annual physical; nothing else.

### Employee status- January

	<u>1979</u>	<u>1978</u>
Salaried	5 (Incl. Pam)	5 (not incl Pam)
Plant Hourly	5	6

Loss prevention survey - L. E. Anderson, January 9th.

### VI Valparaiso Mix Plant

	<u>Produced</u>	<u>Shipped (Oxide Lbs.)</u>
U.S.	217000	163040
Koppers-Hickson	62000	80865
Non-Com E	0	80000

Inventory \$373,831

No medical activity

### Production Schedule - Oxide Lbs.

	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>
U.S.	217,000	217,000	186,000
Koppers-Hickson	124,000	186,000	186,000

### Anticipated Sales

	<u>U. S.</u>	<u>160,000</u>	<u>160,000</u>	<u>240,000</u>
Koppers-Hickson		160,000	160,000	180,000

<u>Personnel</u>	<u>1979</u>	<u>1978</u>
Salaried	2	2
Hourly	1	0
Trucking	1	0
	4	2

TOLS005116

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Capital Expenses - Account 3110 this month	\$13,974
Anticipated February bills	15,000
Chg thru 12/78	129,000
Total	157,974

See G. Schultz report for trucking.

Buying 200,000# Chromic Acid for stock due to 3/1/79 price increase.

### VII Newark Mix Plant

Produced	Shipped	(Oxide Lbs.)
184,427	145,060	Hale Kauai
		Honolulu
		Maui
		Honolulu 96,545
		Koppers 24,305
		Thunderbolt 24,210

Inventory \$119,896

	Feb.	Mar.	Apr.
Oxide Lbs. Anticipated Production	155,000	186,000	186,000
Oxide Lbs. Anticipated Sales Honolulu	50,000	50,000	75,000
	Koppers 50,000	25,000	50,000
	Customers 25,000	50,000	50,000

### VIII Meeting & Travel

Jan. 9 - L. E. Anderson to St. Louis  
Feb. 5-6 - Valpo  
Feb. 12 or 13 - Montgomery  
Feb. 27-28 - Newark

R. F. Simmons

RFS/pds

TOLS005117

# KOPPERS

## Interoffice Correspondence

cc: Charlene Josey  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

To J. D. Hite  
Location K-1001  
Subject Monthly Report February 1979

From R. F. Simmons  
Location St. Louis, Mo.  
Date March 2, 1979

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments February Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	2 X 55 Gal.
Woodtox Preprime RTU	1 X 55 Gal.
Woodtox 140 RTU	12 X 55 Gal.
Woodtox RTU	2 X 5 Gal.
Penta Wood Pres. Conc.	4 X 55 Gal.
Penta Stain #509	2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Yellow	16 X 53 Gal.
Lumbrella 33 Redwood S	2 X 55 Gal
Lumbrella 33 Redwood H	27 X 3 Gal.
Lumber Coat Conc.	2 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Green End Spray 400	2 X 55 Gal.
Green End Spray 400	2 X 5 Gal.
Super Noxtane	5 X 100 Lbs.

##### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Yellow S	27 X 3 Gal.
Lumbrella 33 Clear	5 X 55 Gal.
Lumber Coat Conc. Yellow	2 X 55 Gal.
Liquid Noxtane I	1 X 55 Gal.
Red Orange End Spray 400	2 X 55 Gal.
Pole Life TF	15 X 45 Lbs.

##### (4) Newark, California Warehouse

Liquid Noxtane SSI	9 X 345 Gal.
Liquid Noxtane SSI	70 X 55 Gal.
Red End Sealer	7 X 55 Gal.
Orange End Sealer	4 X 55 Gal.
Clear End Sealer	1 X 55 Gal.

TOLS005118

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
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### (5) Portland, Oregon Blender

Woodtox Preprime T RTU	12845 Gal. Bulk
Woodtox Preprime T RTU	85 X 55 Gal.
Woodtox 140 T Conc.	60 X 55 Gal.
Redy Coat Penta RTU	40 X 55 Gal.
Redy Coat Penta Conc.	19 X 55 Gal.
Timbertox 40 Conc.	3977 Gal. Bulk
Timbertox 40 Conc.	1 X 55 Gal.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	21966 Gal. Bulk
Woodtox Preprime RTU	12 X 55 Gal.
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox 140 Conc.	20 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.
Woodtox 140 RTU	3069 Gal. Bulk
Woodset 310 Conc.	1 X 55 Gal.
Penta Wood Pres. Conc.	23 X 55 Gal.
Penta Wood Pres. RTU	9 X 55 Gal.
KLB Beam Sealer	14 X 55 Gal.
Poletox	18 X 348 Lbs.
WTC #71	17 X 515 Lbs.
WTC #74	2 X 460 Lbs.
Wolman Prestain Conc. Redwood	4 X 55 Gal.
Wolman Prestain Conc. Cedar	4 X 5 Gal.
Anstrik Blue Conc.	2 X 5 Gal.
Polelife Nails & Tags	10 Lots.
Lumbrella 33 Redwood S	54 X 3 Gal.
Lumbrella 33 Clear	15 X 55 Gal.
Lumbrella 25 Cherry Tone	63 X 55 Gal.

TOLS005119

# KOPPERS

## Interoffice Correspondence

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### Penta Shipments February Calendar Month (Lbs.)

	<u>Supplier</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>	<u>Feb. Comparison</u>
To FPD	Reichhold	179,220	178,354	40,770	50,000
Customers	Vulcan	122,350	0	0	89,600
WTC	Dow	44,660	0	0	44,660
Total	Total	346,230	178,354	40,770	139,600
					704,954
					714,284
					756,841

### Invoicing \$ February Accounting Month

	<u>1979</u>	<u>1978</u>	<u>1977</u>
FPD Penta	235,135	116,641	134,009
Customer Penta	61,706	92,592	131,482
WTC Products	170,715	195,914	289,341
KCCA-C	59,922	0	0
Net Total (Less Credits*)	527,369*	405,147	554,832

### II Materials

Penta - All suppliers remain without inventory. Reichhold is the only supplier which has had little production problems in February, but they have been hampered by railcar shortages and poor highway conditions for deliveries to the east. Vulcan lost over half its February production due primarily to two ice storms at Wichita which knocked out power service to the plant. Dow's name even is synonymous with disaster; in spite of their executives' good intentions and promises, their plant refuses to get into operation and their problems are really compounding our already sad supply situation.

For March we have the following quantities already on order:

Reichhold	699,000 Lbs.
Vulcan	405,000 (Has refused to supply 40,000 of this)
Dow	560,000

Of this we expect to receive:

Reichhold	450,000
Vulcan	325,000
Dow	160,000

TOLS005120

# KOPPERS

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We have shuffled shipments, shipped partial loads, deferred & delayed wherever possible and are using nothing but non-saleable material in our own production. There is simply no relief in sight in 1979 and we believe allocation should be instituted.

Solvents - Shell has announced another 2¢ per gallon increase on mineral spirits for April 1; other refiners are sure to follow. #2 diesel (or #2 fuel oil) is expected to be at 50¢ per gallon by April 1. Shortages in petroleum products are being encountered occasionally and we are maintaining a goodly inventory as a safeguard.

### III Inventory & Expenses

January closing inventory (est.)	657,523
February purchases	
Raw Material	201,524
Containers	11,230
Resale	27
Penta (1408)	165,904
Penta (1414)	19,642
February material converted to products	148,746
February estimated cost products sold	394,487
February estimated closing inventory	661,363
March estimated closing inventory	650,000
April estimated closing inventory	650,000
May estimated closing inventory	675,000

See addendum for February expenses and estimates for following months.

### IV Sales Forecast

	<u>March</u>	<u>April</u>	<u>May</u>
FPD Penta	157,000	150,000	150,000
Customer Penta	144,000	125,000	125,000
WTC Products	160,000	200,000	200,000
KCCA-B&C	16,000	36,000	36,000

TOLS005121

# KOPPERS

## Interoffice Correspondence

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From \_\_\_\_\_

Location \_\_\_\_\_

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Date \_\_\_\_\_

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### V General Comments

No open AFE's - No capital expenses.  
Medical Surveillance- Plant workers' physical exams completed; no health problems.

### Employee status- February

	<u>1979</u>	<u>1978</u>
Salaried	(incl Pam5)	5(not incl)
Hourly	5	6

### VI Valparaiso Mix Plant

	<u>Produced</u>	<u>Shipped (oxide lbs.)</u>
U. S.	217,000	184,664
Koppers-Hickson	124,000	161,660
Non-com	0	0

Inventory \$445,389

Medical - Greg Kent got one drop of a partial kettle mix in his eye; with prompt emergency wash and quick trip to hospital for cleaning, there was no problem.

### Production schedule - oxide lbs.

	<u>March</u>	<u>April</u>	<u>May</u>
U. S.	186,000	217,000	217,000
Koppers-Hickson	248,000	217,000	217,000

### Anticipated Sales

	<u>March</u>	<u>April</u>	<u>May</u>
U. S.	210,000	200,000	200,000
Koppers-Hickson	220,000	200,000	200,000

### Personnel February

	<u>1979</u>	<u>1978</u>
Salaried	2	2
Hourly	1	0
Trucking	1	0
	4	2

TOLS005122

# KOPPERS

## Interoffice Correspondence

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Capital expenses - Account 3110 this month	29237
Anticipated March	4500
Charged thru 1/31/79	142974
	<u>176711</u>

This will be all completed when agitator arrives and is installed.

### Trucking

See G. Schultz report. In addition, 6 operating days lost due to tractor and trailer down time. Two loads hauled commercial carrier as result of equipment out of service.

### General

Plant painting underway. During February two truckloads of Southern California Chemical copper oxide were received which have been a headache to use. First testing of iron content was marginal, then solution time was long and finally there has been some very slight sedimentation after 48 hours in solution; according to machine analysis the amount is negligible. Southern Cal. has been repeatedly contacted and told we want no more material of this nature or it will be returned. Of the two loads we are holding, so far, 5600 lbs. for return that we consider unfit for use. The supplier has admitted to us that the inner dryer temperature was too high and it has caused glazing of the minute oxide particles and has hindered normal solution time. In the interest of maintaining Southern Cal. as a supplier we are being fair in trying to use as much of the material we have as possible and at the same time we will be firm in not accepting bad material. Glenn and Greg are to be commended in their vigilance of detecting the problem prior to any manufacture with the material. We will not sacrifice any quality.

We have asked Gil Smith to look into the numbers of selling the Kenworth tractor we own and leasing a replacement. While the tractor has only 135,000 miles now, it received no preventive maintenance during the first 80,000 miles and it is nickeling and diming us to death now as well as causing a lot of lost days. It is estimated a major engine overhaul and clutch replacement will be necessary within a few months.

TOLS005123

BZTO104(e)041944

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

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Subject \_\_\_\_\_

Date \_\_\_\_\_

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### VII Newark Mix Plant

Produced	Shipped (oxide lbs.)		
98,049	143,785	Honolulu Wood	47,755
		Selma	24,265
		Koppers-Ontario	24,250
		Utah Wood	23,805
		Pacific Wood Treating	23,710

February production was lower than anticipated as weather conditions retarded orders.

Inventory \$91,062

	March	April	May
Oxide Lbs. anticipated production	150,000	180,000	180,000
Oxide Lbs. anticipated sales Honolulu	48,000	48,000	48,000
Oxide Lbs. anticipated sales Koppers	24,000	24,000	48,000
Oxide Lbs. anticipated sales Lisc.	72,000	24,000	48,000
Oxide Lbs. anticipated sales CCA	24,000	24,000	24,000
	168,000	120,000	168,000

Jones-Hamilton has installed the AA machine and after Rich Wahlert visit week of 3/5/79 will be beginning to do their own analysis (at first with frequent cross-checks.)

We are having considerable trouble providing air unloading tank trailers to our customers located on the mainland, but out of California. P.I.E. has all the tariff authorities, but no decently equipped trailers; no other one carrier has all the authority and so far only Widing Transportation out of Portland has the correct equipment and their rates appear somewhat higher. We may have to compromise a higher rate to get the desired service; this is still under investigation.

### VIII Meetings & Travel

Feb. 6 - Valparaiso plant

Feb. 22- J. Davis, Eastman Chemical at St. Louis

Feb. 27-28 Mar 1-Jones-Hamilton

Scheduled

Mar. 7 Bob LaBarge-Dow at St. Louis

Mar. 21 Valparaiso

R. F. Simmons

RFS/pds

TOLS005124

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

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### February 1979 Expenses, Operating

	<u>St. Louis</u>	<u>Valpo Plant</u>	<u>Trucking</u>	<u>Newark</u>
Salaries, Wages & Benefits	10,100	2,529	4,333	-
Office Expense	848	848		
M & R	61			
Direct Supply	1,043	1,629	1,302	5,862
Fuel & Power	2,544	1,224		
Indirect Expense	977	159	6	
Consultant	375	30		
Dues/Subscriptions	20			
Chemical Pumps	1,073			
Warehouses/Blenders	2,371			
Travel & Assoc. Expense	44	173	497	
Tote Bins	25			
Depreciation	1,811	3,200	369	
Misc. Tax/Ins	1,800	711	531	
791 Tax	450		200	
Absorbed	27,248	11,332	4,500	5,862
Estimated March Expenses	29,000	12,500	6,500	9,000
Estimated Absorbed	22,000	18,140	9,000	14,985

TOLS005125

cc: Charlene Josey  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report March, 1979

From R. F. Simmons  
Location St. Louis, Missouri  
Date April 2, 1979

### St. Louis, Missouri Plant & WTC Operations

#### L. Shipments March Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime RTU	10 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.
Penta Wood Pres. Conc.	3 X 55 Gal.
Penta Stain 309	3 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 15 Redwood	6 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Redwood S	12 X 55 Gal.
Lumbrella 33 Redwood S	189 X 5 Gal.
Liquid Noxtane SSI	6 X 55 Gal.
Liquid Noxtane I	1 X 55 Gal.
Timbertreat 625 Conc	2 X 55 Gal.
KLB Beam Sealer	10 X 55 Gal.

##### (3) Atlanta, Georgia Warehouse

Lumber Coat Conc.	81 X 5 Gal.
Liquid Noxtane I	9 X 55 Gal.
Liquid Noxtane SSI	12 X 55 Gal.
Red/Orange End Spray 400	13 X 55 Gal.
Lumbrella 33 Clear	15 X 55 Gal.
Lumbrella 33 Redwood S	15 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.

TOLS005126

# KOPPERS

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### (4) Newark, California Warehouse

Liquid Noxtane SSI	4 X 345 Gal.
Liquid Noxtane SSII	8 X 55 Gal.
Liquid Azide 200	3 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime T RTU	7785 Gal. Bulk
Woodtox Preprime T RTU	2 X 55 Gal.
Woodtox 140 T Conc.	90 X 55 Gal.
Woodtox 140 T RTU	5927 Gal. Bulk
Redy Coat Penta Conc.	14 X 55 Gal.
Redy Coat Penta RTU	14 X 55 Gal.
Timbertox 40 Conc.	3 X 55 Gal.
WR 340 Conc.	2 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	29004 Gal. Bulk
Woodtox RTU	5082 Gal. Bulk
Woodtox 140 RTU	3033 Gal. Bulk
Penta Wood. Pres. Conc.	8395 Gal. Bulk
Woodtox Preprime RTU	77 X 55 Gal.
Woodtox Preprime Conc.	1 X 55 Gal.
Woodtox Preprime Conc.	3 X 5 Gal.
Woodtox 140 Conc.	20 X 55 Gal.
Woodtox 140 RTU	1 X 55 Gal.
Woodtox 140 RTU	141 X 5 Gal.
Timbertox D-5 RTU	10 X 55 Gal.
WR 340 Conc.	10 X 400 Lbs.
Penta Wood Pres. Conc.	10 X 55 Gal.
Penta Wood Pres. RTU	5 X 55 Gal.
Penta Wood Pres. RTU	4 X 5 Gal.
Poletox	20 X 348 Lbs.
Poletox	40 X 57 Lbs.

TOLS005127

# KOPPERS

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Liquid Noxtane I	4 X 55 Gal.
Liquid Noxtane SS1	21 X 55 Gal.
Timbertreat 625 Conc.	2 X 55 Gal.
Timbertreat 625 Conc.	3 X 5 Gal.
WTC #71	10 X 515 Lbs.
WTC #74	2 X 460 Lbs.
Wood Seal Wax	1 X 426 Lbs.
Wood Seal Wax	2 X 40 Lbs.
Clear End Sealer	4 X 55 Gal.
Clear End Sealer	1 X 5 Gal.
Green End Sealer	10 X 5 Gal.
Red End Sealer	1 X 5 Gal.
Wolman Prestain Conc. Cedar Brown	1 X 55 Gal.
Penta Stain #509	3 X 55 Gal.
Lumbrella 25 Brown	2 X 55 Gal.
Lumbrella 33 Yellow Hard	1 X 55 Gal.

### Penta Shipments March Calendar Month (Lbs.)

To	From:	Sales				Mar. Comparison	
		Reichhold	Vulcan	Dow	WTC	1978	1977
FPD	189,425	122,340	119,230	18,624V	449,619	540,098	530,449
Customer	121,325	48,000	66,550	97,300R	333,175	392,029	512,638
WTC	188,795	37,480	-	-	-	-	-
	499,545	207,820	185,780	115,924	782,794	932,127	1,043,087

### Invoicing \$ March Accounting Month

	1979	1978	1977
FPD Penta	191,193	222,477	188,102
Customer Penta	94,981	77,864	233,948
WTC Products	184,905	222,726	171,267
KCCA C & B	471,119	521,860*	593,317
	32,377		
	503,456		

\* incl. credits

TOLS005128

# KOPPERS

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### II. Materials

Penta - Reichhold and Vulcan producing at capacity, however with order backlog on hand, there is no excess in sight for months, Dow finally has some limited production - 2000 Lbs. blocks only yet, and tech. penta, not EC-7. EC-7 seems to be shelved for some time.

Koppers plants are not pushing for block dissolver installation and accordingly flake and prill supply/demand situation is serious. Vulcan is not fulfilling its commitment to keep Montgomery supplied with bulk for the Cellon plant; the plant is having shutdown periods between each delivery. Reichhold has been no help for they have had no material at Pine Bluff. And lastly, if Dow Doesn't get with it on 1000 Lb. blocks within one week, we'll really be in a bind on this form and size.

We are booked easily for more penta than we expect to receive in the next 60 days.

Solvents - Short supply and monthly raises in price in sight; maintaining full tanks.

### III. Inventory & Expenses

February closing	664,117
March purchases	213,098
Raw Materials	198,849
Containers	14,067
Resale	182
Penta (1408)	145,561
Penta (1414)	87,351
March material converted to products	154,061
March estimated cost products sold	142,562
March estimated closing inventory	734,653
April estimated closing inventory	700,000
May estimated closing inventory	675,000
June estimated closing inventory	675,000
March inventory greater than previously estimated due to truck strike.	

Addendum attached March expenses & 3 month estimated.

TOLS005129

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### IV. Sales Forecast

	April	% PEOR	May	% PEOFIT	June
FPD Penta	180,000		180,000		180,000
Customer Penta	140,000		125,000		125,000
WTC Products	205,000		200,000		200,000
KCCA-B&C	94,000		74,000		94,000
	619,000		579,000		599,000

### V. General Comments - St. Louis

No open AFE's - No capital expenses.

Medical - No activity this month

Employee status - March	1979	1978
Salaried	5 (Incl. Pam)	4 exclusive
Hourly	5	5

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Licensee	288,000	312,310
Koppers-Hickson	224,000	202,435
Non-Com E Production of April		40,000

Inventory \$406,135

Medical - No activity

Production Schedule - Oxide Lbs.	April	May	June
U. S.	279,000	248,000	248,000
Koppers-Hickson	217,000	217,000	217,000

Anticipated Sales	April	May	June
U. S. Licensees	280,000	240,000	260,000
Koppers-Hickson	180,000	220,000	200,000

TOLS005130

# KOPPERS

## Interoffice Correspondence

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Date \_\_\_\_\_

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Employee Status	March	1979	1978
Salaried		2	2
Hourly		1	0
Trucking		1	0
		4	2

Capital Expenses - Account #3110 this month \$4366

Trucking - See G. Schultz report. No down time this month, but received call this morning that upon arrival of unit from South Dakota that the clutch replacement must be done. We will daily rent a tractor to keep us on the road for the down period. Traffic Dept. is not expecting our second trailer delivered until at least late April; also handling with Traffic for tractor --- progressing slowly.

General

Plant painting completed.

Continuing to have production problems with questionable soluble copper oxide form Southern California Chemical. Whereas Don Nickerson (Sou. Cal. marketing V.P.) has had a very personal interest with our dissolving problem, his Union, Ill. plant ships all the junk they can. We are very shortly considering a ban on Union product entirely.

At least a portion of April production will have to be done with the arsenic pentoxide stock as acid supply from Conley is deteriorating due to our trucking situation. We expect arsenic monitoring to be disastrous.

I assume we are all aware that the new dumping and conveyor system cannot be used to feed pentoxide to the reactor.

Chromic Acid has been promised sufficient for April business; we are operating with less than one weeks inventory.

TOLS005131

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

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Subject \_\_\_\_\_

Date \_\_\_\_\_

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### VII Newark Mix Plant

Produced	Shipped	Honolulu	McFarland-Cas.
181,724	141,485	47,155	47,790
		Exterior 22,365	Selma 24,175

Inventory \$133,326

Oxide Lbs. Production	April	May	June
	180,000	150,000	120,000
Oxide Lbs Sales Honolulu	48,000	48,000	48,000
Oxide Lbs. Sales Koppers	48,000	24,000	24,000
Oxide Lbs. Sales Licenssee	48,000	40,000	20,000
Oxide Lbs. Sales CCA	24,000	24,000	24,000
	168,000	136,000	116,000

*3/20/82  
EWT*

A near disastrous spill by Matson in loading a RO/RO trailer March 30 was promptly cleaned up by Jones-Hamilton people and Industrial Tank. As a Result, we are loading only drums for Honolulu Wood until better arrangements can be made. Traffic was requested some time ago for an evaluation of tank container service.

As of this writing, we have had no difficulties due to the national teamster strike. One potential problem however, is arsenic acid to Newark. Our carrier, P.I.E., has locked up all western operation so unless an alternate carrier is found when our stock gets low, we're in trouble.

### VIII. Meetings - Travel

March 23 - Valparaiso

March 7 - Dow (LaBarge- Thompson) at St. Louis

March 15- Tenneco-Cal-Ink (Kallal) at St. Louis

March 15 - Nalco (Korrell) at St. Louis

March 20 - Drake Petroleum (Crocker) at St. Louis

March 30 - Monsanto (Segar-Oxo Bottoms) at St. Louis

March 29 - Dow (King-Stoppert) at St. Louis

Scheduled

April 4 - Chater International at St. Louis

April 23-24 - Valparaiso

R. F. Simmons

TOLS005132

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

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Location \_\_\_\_\_

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Date \_\_\_\_\_

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### March 1979 Expenses, Operating

	St. Louis	Valpo	Trucking	Newark
Salaries, Wages & Benefits	16,004	3,798	2,331	
Office Expense (RENT 1273)	2228	942	1,109	
M & R	296	387	737	
Direct Supply	8286	606	1,363	1,455
Fuel & Power	2764	2,988	1,599	7,984
Indirect Expense	578	167	6	
Consultant	797			
Dues/Subscriptions	91	29		
Chemical Pumps	2,386			
Warehouses/Blenders	6,660			
Travel & Assoc. Expense	358	175	496	319
Depreciation	1,811	3,234	700	
Misc. Tax/Ins	1,220	389	43	103
791 Tax	689	750	1,300	
Absorbed	(ACTUAL 39059)	35,585	13,331	7,068
		25,424	19,437	8,406
Estimated April Expenses	30,000	14,000	15,000	13,200
Estimated Absorbed	23,000	20,700	10,000	17,980
Estimated May Expenses	35,000	14,000	8,000	10,000
Estimated Absorbed	28,000	19,400	12,000	15,000
Estimated June Expenses	32,000	14,000	10,000	9,000
Estimated Absorbed	26,000	19,400	15,000	12,000

TRANSFER  
FROM OFFICE 2  
TO DIV. 1

EXPENSE OVER 3 mos.

TOLS005133

cc: Charlene Josey  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report April 1979

From R. F. Simmons  
Location St. Louis, Missouri  
Date May 2, 1979

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments April Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox 140 Conc.	1 X 55 Gal.
Woodtox 140 RTU	3 X 55 Gal.
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox Preprime RTU	3 X 55 Gal.
Woodtox RTU	10 X 55 Gal.
Penta Wood Pres. Conc.	5 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	41 X 55 Gal.
Liquid Noxtane I	14 X 55 Gal.
Liquid Azide 200	8 X 55 Gal.
Lumbrella 33 Redwood S	15 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 33 Yellow S	54 X 3 Gal.
Timbertreat 625 Conc.	1 X 55 Gal.
Green End Spray 400	2 X 55 Gal.
Green End Spray 400	18 X 5 Gal.
Red End Spray 400	10 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	16 X 55 Gal.
Timbertreat 625 Conc.	1 X 55 Gal.
Lumbrella 33 Redwood S	10 X 55 Gal.
Lumbrella 33 Clear	16 X 55 Gal.
Lumbrella 33 Yellow S	3 X 5 Gal.
WTC #71	4 X 515 Lbs.
Blue End Spray 400	4 X 55 Gal.
Red Orange End Spray 400	4 X 55 Gal.
Woodtox Preprime Conc.	2 X 55 Gal.
Lumber Coat Conc.	27 X 3 Gal.

TOLS005134

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	4 X 345 Gal.
Liquid Noxtane SSI	87 X 55 Gal.
Liquid Azide 200	13 X 55 Gal.
Clera End Sealer	6 X 282 Gal.
Red End Sealer	5 X 55 Gal.
Pallets	11 Each

### (5) Portland, Oregon Blender

Woodtax Preprime T RTU	22613 Gal. Bulk
Woodtax Preprime T RTU	80 X 55 Gal.
Woodtax 140 T Conc.	20 X 55 Gal.
Timbertox 40 Conc.	510 Gal. Bulk
Timbertox 40 Conc.	13 X 55 Gal.
Redy Coat Penta RTU	31 X 55 Gal.
Redy Coat Penta Conc.	11 X 55 Gal.
WR 340 Conc.	34 X 408 Lbs.
Petroset II	6 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU	52246 Gal. Bulk
Woodtax Preprime RTU	10 X 55 Gal.
Woodtax Preprime Conc.	10 X 55 Gal.
Woodtax 140 Conc.	20 X 55 Gal.
Woodtax 140 Conc.	2 X 5 Gal.
Woodtax 140 RTU	9967 Gal. Bulk
Woodtax RTU	5025 Gal. Bulk
Woodtax RTU	11 X 55 Gal.
Woodtax 152 RTU	54 X 5 Gal.
Penta Wood Pres. Conc.	3 X 55 Gal.
Penta Wood Pres. Conc.	42 X 55 Gal.
Penta Wood Pres. RTU	1 X 5 Gal.
	9 X 55 Gal.

TOLS005135

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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Clear End Sealer	3 X 55 Gal.
Clear End Sealer	2 X 5 Gal.
Red End Sealer	1 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
Green End Spray 400	1 X 55 Gal.
Lumber Coat Conc.	4 X 55 Gal.
Wolman Prestain Conc. Redwood	11 X 55 Gal.
Blue Anstrik Conc.	3 X 5 Gal.
Timbertreat 625 Conc.	10 X 55 Gal.
Liquid Noxtane SSI	40 X 55 Gal.
Liquid Noxtane I	4 X 55 Gal.
Lumbrella 15 Redwood	22 X 55 Gal.
Lumbrella 15 Yellow	20 X 55 Gal.
Lumbrella 33 Yellow S	1 X 55 Gal.
WTC #71	4 X 515 Lbs.
WTC #71	1 X 84 Lbs.
Poletox	20 X 348 Lbs.
Poletox	404 X 57 Lbs.
Polelife TF	10 X 45 Lbs.
Woodtreat AA	3 X 40 Lbs.
Penta Check	16 X 1 QT.
Penta Stain #502	20 X 5 Gal.
Penta Stain #506	20 X 5 Gal.

### Penta Shipments April Calendar Month (Lbs.)

To	From Reichhold	Vulcan	Dow	WTC	Sales Total	April Comparison	
						1978	1977
FPD	130,935	40,180	244,674	10,500	426,289	435,350	315,517
Customers	44,795	60,000	-	38,200	142,995	404,684	368,892
WTC	69,000	20,000Scrap	-	-	104,000	29,400	32,200
	15,000Tetra						
	259,730	120,180	244,674	48,700	673,284	869,484	716,609

TOLS005136

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Invoicing \$ April Accounting Month

	<u>1979</u>	<u>1978</u>	<u>1977</u>
FPD Penta	91,728	187,034	200,494
Customer Penta	137,766	216,655	161,401
WTC Products	298,975	305,503	225,160
KCCA C & B	108,256	-	-
	<u>643,123</u>	<u>*709,073</u>	<u>587,055</u>

\*including credits

### II Materials

Penta - Separate reports this month should have kept you and Paul abreast of the problems. Order bookings on hand for 3,000,000 pounds.

Solvents - Everything petroleum related increasing in cost at least monthly.

### III Inventory & Expenses

March Closing	746,176
April Purchases	143,684
Raw Materials	137,511
Containers	4,489
Resale WTC	1,684
Penta -1408	(190,431)
Penta -1414	(89,556)
April material converted to products	155,225
April estimated cost products sold	218,850
April estimated closing inventory	671,010
May estimated closing inventory	675,000
June estimated closing inventory	650,000
July estimated closing inventory	675,000

TOLS005137

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### **IV Sales Forecast**

	Profit					
	May	%	June	%	July	%
FPD Penta	296,000	12	250,000	12	225,000	12
Customer Penta	162,000	13	125,000	14	150,000	14
WTC Products	250,000	24	200,000	25	200,000	25
KCCA-B&C	106,000	18	106,000	18	106,000	18

### **V General Comments**

No AFE - No capital expenses

Medical activity - none

Employee status April

1979

1978

Salaried	(Incl Pam)	5	4 exclusive
Hourly		5	5

### **VI Valparaiso Mix Plant**

Oxide Lbs.	Produced	Shipped
Licensee	279,000	276,325
Koppers-Hickson	217,000	184,330
Non-Com E		120,000

Inventory \$421,197

No medical activity

### Production Schedule - Oxide Lbs.

	May	June	July
Domestic	225,000	187,000	225,000
Koppers-Hickson	187,000	150,000	225,000

### Sales Anticipated

	May	June	July
U. S.	260,000	260,000	240,000
Koppers-Hickson	160,000	160,000	200,000

TOLS005138

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

<u>Inventory</u>	<u>May</u>	<u>JUNE</u>	<u>July</u>
	350,000	325,000	300,000

Employee Status	April	<u>1979</u>	<u>1978</u>
Salaried		2	2
Hourly		1	0
Trucking		1	0
		4	2

Trucking- Second driver began training April 30 - Traffic says no unit available until near end of May. Three days down time on K-W with clutch out, but expense not nearly as high as expected. Two days lost first of May on trailer- broken springs.

### General

We reserve comment on Southern California Chemical copper oxide raw material problems until their Union plant thinks our surveillance has had time to relax. More problems are expected - its just a matter of time.

For some reason our agitator for new reactor is being unduly delayed; working on Pro-Quip.

### VII Newark Mix Plant

Produced  
180,285

Shipped  
182,475

Honolulu (2)  
K-Ontario  
K-Oroville

Pacific Wood  
Exterior Wood  
Utah Wood

<u>Inventory</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>
MT Drums Inv.	299,796	275,000	250,000	225,000
	1,531			

TOLS005139

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

	May	June	July
Oxide Lbs. Production	180,000	180,000	180,000
Sales Honolulu	86,100	86,100	57,400
Koppers	24,000	48,000	48,000
Licensede	96,000	72,000	96,000
CCA Customers	-	24,000	24,000
	206,100	230,100	225,400

### VIII Meetings -Travel

April 19 - Valpo with John Hite  
April 27 - Valpo  
May 9 Goydan - St. Louis  
May 10 & 11 - 1-1/2 Days Vacation  
May 25 & 26 Memorial Day plant holidays.

R. F. Simmons

RFS/pds

TOLS005140

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K-1001  
 Subject April 1979 Operating Expenses

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date May 7, 1979

<b>Salaries Wages &amp; Benefits</b>	
Office Expenses	
Travel Expenses	
M & R	
Direct Supply	
Fuel & Power	
Indirect Expense	
Consulting & Prof. Services	
Subscriptions Dues/Donations	
Depreciation	
Insurance/Taxes	
Misc Expense	
Misc. Income	
 Total Expenses	
Absorbed	
 May expenses	
Absorbed	
 June Expenses	
Absorbed	
 July Expenses	
Absorbed	

	<b>St. Louis</b>	<b>Valpo</b>	<b>Valpo Trucking</b>	<b>Newark</b>
13787	4186	2024		
2499	644			
246	351	213		
420	2408	322		
3133	1400	2973		16452
3174	1536			
572	1007	256		
708	40			
65				
1834	3234	1731		
5250	1123	82		103
(194)	(455)			
 31494	15678	7601		16555
24035	20733	9836		18035
 36000	15500	9500		16500
28000	17200	10500		18000
 31000	14500	11000		16500
26000	14086	12000		18000
 31000	15000	11500		16500
26000	18810	13000		18000

R. F. Simmons

RFS/pds

TOLS005141

cc: Jonette Wharton  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report May 1979

From R. F. Simmons  
Location St. Louis, Mo.  
Date June 4, 1979

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments May Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	6 X 55 Gal.
Woodtox Preprime RTU	12 X 55 Gal.
Woodtox 140 RTU	18 X 55 Gal.
Woodtox RTU	135 X 5 Gal.
Penta Wood Pres. Conc.	8 X 55 Gal.
Penta Wood Pres. Conc.	52 X 5 Gal.
Penta Wood Pres. RTU	12 X 55 Gal.
Penta Stain #509	2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I	25 X 55 Gal.
Liquid Noxtane SSI	16 X 55 Gal.
Liquid Azide 200	12 X 55 Gal.
Timbertreat 625	5 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 15 Redwood	2 X 53 Gal.
Green End Spray 400	12 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	2 X 55 Gal.
Liquid Noxtane I	17 X 55 Gal.
Timbertreat 625	1 X 55 Gal.
Ambrella 33 Clear	46 X 55 Gal.
Red End Spray 400	2 X 55 Gal.
Red Orange End Spray 400	4 X 55 Gal.
Penta Wood Pres Conc.	5 X 55 Gal.
WTC #71	4 X 515 Lbs.
Lumber Coat Conc.	81 X 3 Gal.

TOLS005142

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI

5 X 345 Gal.

Liquid Noxtane SSI

80 X 55 Gal.

Liquid Azide 200

2 X 55 Gal.

Red End Sealer

25 X 55 Gal.

Clear End Sealer

6 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime T RTU

10490 Gal. Bulk

Woodtox Preprime T RTU

12 X 55 Gal.

Woodtox 140 T RTU

6980 Gal. Bulk

Timbertox 40 Conc.

63 X 55 Gal.

WR 340 Conc.

7 X 408 Lbs.

Petroset II

10 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU

42148 Gal. Bulk

Woodtox Preprime RTU

9 X 55 Gal.

Woodtox Preprime Conc.

16 X 55 Gal.

Woodtox 140 Conc.

22 X 55 Gal.

Woodtox 140 RTU

3000 Gal. Bulk

Woodtox 140 RTU

1 X 55 Gal.

Woodtox RTU

3 X 55 Gal.

Woodtox RTU

7 X 5 Gal.

Ginco Penta Pres RTU

50 X 5 Gal.

Timbertox D-5

269 X 55 Gal.

Penta Wood Pres. Conc.

72 X 55 Gal.

Penta Wood Pres. Conc.

9 X 5 Gal.

Penta Wood Pres. Conc.

8164 Gal. Bulk

Penta Wood Pres. RTU

5 X 55 Gal.

Penta Wood Pres. RTU

9 X 5 Gal.

Poletox

65 X 348 Lbs.

Poletox

125 X 57 Lbs.

TOLS005143

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Woodtreat AA  
 Wood Seal Wax  
 Wood Seal Wax  
 Clear End Sealer  
 Clear End Sealer  
 Red End Sealer  
 Red End Sealer  
 WK-60 Solvent  
 WTC #71  
 WTC #74  
 Petroset 11  
 Liquid Noxtane I  
 Liquid Noxtane SSI  
 Timbertreat 625  
 Anstrik Blue Conc.  
 Wolman Prestain Redwood Conc.  
 Wolman Prestain Cedar Conc.  
 Lumbrella 25 Brown  
 Lumbrella 33 Yellow S  
 KLB Beam Sealer  
 Penta Stain #502  
 Penta Stain #506  
 Penta Stain #509  
 Polykraft Paper Br/B1

6 X 40 Lbs.  
 1 X 426 Lbs.  
 2 X 80 Lbs.  
 5 X 55 Gal.  
 24 X 5 Gal.  
 1 X 55 Gal.  
 1 X 5 Gal.  
 44 X 55 Gal.  
 7 X 515 Lbs.  
 3 X 460 Lbs.  
 8 X 460 Lbs.  
 12 X 55 Gal.  
 5 X 55 Gal.  
 2 X 55 Gal.  
 7 X 5 Gal.  
 2 X 55 Gal.  
 6 X 5 Gal.  
 1 X 55 Gal.  
 50 X 55 Gal.  
 2 X 55 Gal.  
 5 X 5 Gal.  
 2 X 5 Gal.  
 2 X 55 Gal.  
 428 rolls

### Penta Shipments May Calendar Month Lbs.

To	From	Reichhold	Vulcan	Dow	WTC
FPD		158,495	41260	201350	21,000
Customers		89,540	104000	0	55,200
WTC		170,175	0	0	(-86,200)
		418,210	145,260	201350	76,200

Sales	May Comparison	
Total	1978	1977
401,105	566,225	518,073
248,740	517,289	403,249
93,975	80,250	200,850
743,820	1,163,764	1,122,172

TOLS005144

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Invoicing May Accounting Month \$

	<u>Profit \$</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
FPD Penta	13.3	303,297	221,657	133,576
Customer Penta	13.5	102,135	191,906	181,774
WTC Products	20	310,402	261,449	288,172
KCCA-C	15.6	64,551	-	-
KCCA-B	18.6	43,908	-	-
Total		<u>824,293</u>	<u>675,012</u>	<u>603,522</u>

### II Materials

#### Penta

Dow - Finally beginning to let us have 100,000 Lb./week. - Too little, far too late.

Reichhold-has lived up to 1979 commitment to date, plus little more. Expect June to be off some due to scheduled plant maintenance.

Vulcan-has been unreliable for west coast customers.

Solvents- Increasing prices at least monthly and several cents per gallon per time. Shortages and allocations prevalent.

Chemicals - Waxes, resins, pigments all increased this month.

### III Inventory and Expenses

#### April closing

##### May purchases

Raw Material	134,187	\$664,015
Containers	18,916	160,366
Resale ETC	7,263	
Penta 1408	(206,022)	
Penta 1414	( 22,515)	
May material converted to products		240,771
May estimated cost products sold		235,905

TOLS005145

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

May estimated closing inventory	588,476	587,680
June estimated closing inventory	650,000	
July estimated closing inventory	675,000	
August estimated closing inventory	675,000	

### IV Sales Forecast

	June \$	Profit	July	August
FPD Penta	309,000	12	260,000 13	280,000 13
Customer Penta	100,000	15 150	90,000 15 135	75,000 15
WTC Products	240,000	25	220,000 25	230,000 26
KOCA B & C	110,000	18	110,000 18	110,000 18

### V General Comments

No AFE-No capital expenses

Medical activity- none

Employee status May 1979 1978

Salaried 5 4

Hourly 5 5

Separate letters previously sent on St. Louis elevator fall and City of St. Louis plumbing inspection deficiency.

### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Licensee	262,500	333,796
Koppers-Hickson	187,500	164,760

268,228

Inventory \$268,666 (\$150,000 reduction from April)  
\$300,000 June- \$350,000 July- 350,000 August

Medical activity Greg Kent 6 months checkup  
Larry Stewart annual checkup  
Jerry Jensen preemploy checkup  
All O.K.

TOLS005146

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### Production Schedule (Oxide Lbs.)

Licensee  
Koppers Hickson

	<u>June</u>	<u>July</u>	<u>August</u>
320,000	300,000	300,000	
200,000	200,000	200,000	

### Sales Anticipated

Licensee  
Koppers Hickson

	<u>June</u>	<u>July</u>	<u>August</u>
320,000	300,000	300,000	
200,000	200,000	200,000	

(Above is all hoping raw material is available, we might add.)

### Trucking

See Schultz report. We need the second unit badly!

Employee status May

	<u>1979</u>	<u>1978</u>
Salaried	2	2
Hourly	1	0
Trucking	2	0
	3	2

### VII Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	216,501	235,540

Shipments  
Honolulu 6 Containers  
Exterior  
Cascade  
Selma  
Koppers -Ontario  
Kellogg  
Pacific Wood Pres.

### Inventory

	<u>May</u>	<u>June</u>	<u>July</u>	<u>August</u>
Empty Drums	\$206,534	\$220,000	\$250,000	\$250,000
	966			

TOLS005147

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### Projection of Production/Sales - Oxide Lbs.

	<u>June</u>	<u>July</u>	<u>August</u>
Production Sales	<u>250,000</u>	<u>200,000</u>	<u>220,000</u>
Honolulu	<u>71,750</u>	<u>86,100</u>	<u>57,400</u>
Koppers	<u>48,000</u>	<u>48,000</u>	<u>48,000</u>
Licensees	<u>96,000</u>	<u>72,000</u>	<u>72,000</u>
CCA Customers	<u>48,000</u>	<u>24,000</u>	<u>48,000</u>
	<u>263,750</u>	<u>230,100</u>	<u>225,400</u>

### VIII Meetings, Travel

- May 9 & 10 Goydan at St. Louis
- May 10 & 11 1-1/2 days vacation
- May 16 & 17 Arsenault at St. Louis
- June 8 1 day vacation
- June 13 & 14 Valparaiso

R. F. Simmons

RFS/pds

TOLS005148

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject May 1979 Operating Expenses

Date June 7, 1979

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	13502	3602	3225	
Office Expenses	1228	677		
Travel Expense	610	56	523	
M & R	555	1986	1002	
Direct Supply	52	374	826	18213
Fuel & Power	263	968		
Indirect Expense	383	515	6	
Consulting & Prof. Services	175			
Subscriptions Dues/Donations	43			
Depreciation	1834	3234	1731	
Insurance/Taxes	4000	2000	1200	33
Misc Expense	338	175		
Misc. Income	(175)			
Warehouses 170/390/395	8083			
Total Expense	30891	13587	8513	18246
Absorbed	29930	18810	16448	21666
Estimates				
June Expenses	26000	16000	9500	20000
Absorbed	24000	21736	15000	24975
July Expenses	30000	15000	11000	15000
Absorbed	29000	20900	14000	19980
August Expenses	29000	15000	11000	17500
Absorbed	29000	20900	14000	21978

R. F. Simmons

RFS/pds

TOLS005149

cc: Jonette Wharton  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

# KOPPERS

## Interoffice Correspondence

To J. D. Hite From R. F. Simmons  
Location K-1001 Location St. Louis, Mo.  
Subject Monthly Report June 1979 Date June 29, 1979

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments June Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	6 X 55 Gal.
Woodtox Preprime RTU	2 X 55 Gal.
Woodtox RTU	2 X 5 Gal.
Penta Wood Pres. Conc.	1 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	10 X 55 Gal.
Liquid Noxtane I	10 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.
Lumbrella 15 Redwood	6 X 55 Gal.
Lumbrella 33 Redwood S	8 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	3 X 55 Gal.
Liquid Noxtane I	31 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.
Lumber Coat Conc.	17 X 55 Gal.
Lumbrella 33 Clear	12 X 55 Gal.
Lumbrella 33 Yellow S	135 X 3 Gal.
WTC #71	2 X 515 Lbs.
Green End Spray 400	1 X 55 Gal.
Red Orange End Spray 400	12 X 55 Gal.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	9 X 345 Gal.
Liquid Noxtane SSI	65 X 55 Gal.
Liquid Azide 200	10 X 55 Gal.
Clear End Sealer	3 1/4X 330 Gal.
Clear End Sealer	48 X 55 Gal.
Orange End Sealer	8 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime T RTU	1811 Gal. Bulk
Woodtox Preprime T RTU	160 X 55 Gal.
Woodtox 140 T Conc.	80 X 55 Gal.
Timbertox 40 Conc	1000 Gal. Bulk
Timbertox 40 Conc.	48 X 55 Gal.
Redy Coat Penta Conc.	14 X 55 Gal.
Redy Coat Penta RTU	14 X 55 Gal.
WR 340 Conc.	37 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	30206 Gal. Bulk
Woodtox Preprime RTU	9 X 55 Gal.
Woodtox RTU	9912 Gal. Bulk
Woodtox RTU	26 X 5 Gal.
Woodtox 140 RTU	5 X 55 Gal.
Woodtox 152 RTU	5969 Gal. Bulk
Woodtox 152 RTU	5 X 5 Gal.
Woodtox S Conc.	90 X 55 Gal.
Woodset 310	2 X 55 Gal.
Timbertox D-5	36 X 55 Gal.
Penta Wood Pres. Conc.	13 X 55 Gal.
Penta Wood Pres. RTU	5954 Gal. Bulk
Penta Wood Pres. RTU	7 X 55 Gal.
Penta Wood Pres. RTU	44 X 3 Gal.

TOLS005151

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Poletox	65 X 348 Lbs.
Poletox	26 X 57 Lbs.
Tritox	10 X 57 Lbs.
Woodtreat AA	11 X 40 Lbs.
WTC #71	4 X 515 Lbs.
WTC #74	1 X 40 Lbs.
WTC #7-11	5 X 40 Lbs.
WR 340 Conc.	51 X 400 Lbs.
Liquid Noxtane I	13 X 55 Gal.
Liquid Noxtane SS1	6 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.
Color Coat Brown	33 X 5 Gal.
Wolman Prestain Conc. Redwood	11 X 55 Gal.
Anstrik Munsel Grey	2 X 55 Gal.
Lumbrella Golden Pine	5 X 55 Gal.
Red End Sealer	1 X 55 Gal.
Red End Sealer	5 X 5 Gal.
Clear End Sealer	1 X 55 Gal.
Penta Stain #502	5 X 5 Gal.
Penta Stain #506	2 X 5 Gal.
Penta Stain #507	5 X 5 Gal.
Penta Stain #508	5 X 5 Gal.
Penta Stain #509	4 X 5 Gal.
Penta Stain #509	4 X 55 Gal.

### Penta Shipments June Calendar Month Lbs.

To	FROM:	Reichhold	Vulcan	Dow	WTC
FPD		177,938	90,206	487,055	-
Customers		71,720	-	60,000	46,800
WTC		142,500	-	-	-
		<u>392,158</u>	<u>90,206</u>	<u>547,055</u>	

Sales June Comparison		
Total	1978	1977
755,199	474,940	589,997
178,520	553,785	480,422
-	80,500	38,800
933,719	1109,225	1109,219

TOLS005152

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Invoicing June Accounting Month \$

	\$ Profit	1979	1978	1977
FPD Penta	13	195,186	213,518	281,979
Customer Penta	15	123,154	193,107	166,834
WTC Products	22	261,548	279,969	219,720
KCCA-C	15.5	66,436	-	-
KCCA-B	18.5	30,430	-	-
Total		676,754	686,594	668,533

### II. Materials

Penta - Dow has begun to release 4 truckloads per week to us fairly consistently; this is not much more than Koppers' plants demand however. Reichhold still coming through with their commitment plus a little each month. Vulcan is not doing much for us, with either Montgomery bulk or West Coast customers.

Solvents & Chemicals - Petroleum, metal based pigments and items of energy-intense production are increasing frequently. Example - low end point, Rule 66 mineral spirits a 10¢/gallon increase August 1 and is on allocation.

### III Inventory

May closing		587,680
June Purchases		234,456
Raw material	220,992	
Containers	13,464	
Penta 1408	151,367	
Penta 1414	35,505	
June material converted to products		196,195
June estimated cost products sold		204,000
June estimated closing inventory		618,136
July estimated closing inventory		675,000
August estimated closing inventory		650,000
September estimated closing inventory		650,000

TOLS005153

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### IV Sales Forecast

	July	Anticipated \$Profit	August	Sept.
FPD Penta	288,000	14	260,000	250,000
Customer Penta	188,000	14	175,000	190,000
WTC Products	150,000	22	200,000	210,000
KCCA-B	48,000	18	48,000	48,000
KCCA-C	40,000	16.5	40,000	40,000

### V. St. Louis General Comments

No AFE's - No capital expenses

Medical activity - none

Employee status - June	1979	1978
Salaried	5	4
Hourly	5	6

Previous letter sent in June on potential penta source.

Expect to again revise all cost standards in July account rapidly rising material costs; many product prices will need quick consideration.

### VI Valparaiso Mix Plant

(Oxide Lbs)	Produced	Shipped
Licensee	375,000	416,755
Koppers Hickson	150,000	185,775

Inventory	June	\$199,695.67	(\$68,524 reduction from May)	June 190386
	July	210,000		
	August	220,000		
	September	225,000		

No medical activity in June.

TOLS005154

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

-6-

### Production Schedule (Oxide Lbs.)

	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>
Licensee Koppers-Hickson	375,000 225,000	338,000 188,000	338,000 188,000

### Anticipated Sales

Licensee Koppers-Hickson	380,000 280,000	360,000 180,000	360,000 180,000
-----------------------------	--------------------	--------------------	--------------------

Trucking - See G. Schultz report. Traller received July 2, no tractor; Lack of equipment ruining our opportunities this summer.

Employee Status - June	<u>1979</u>	<u>1978</u>
Salaried	2	1
Hourly	1	2
Trucking	2	1
	5	4

June air monitoring points out dramatically our deficiency when using pentoxide.

### VII. Newark Mix Plant

(Oxide Lbs.)	<u>Produced</u>	<u>Shipped</u>	<u>Shipments</u>	
	240,552	266,965	Honolulu 5 containers Exterior Pacific Wood Treat Pacific Wood Pres. Selma Dent Russell McFarland Cascade Oroville Ontario	
Inventory	June 142,969	July 175,000	Aug. 190,000	Sept. 210,000
Empty Drums	\$136,903	6,607		

TOLS005155

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

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### Projection of Production/Sales - Oxide Lbs.

	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>
Production	240,000	270,000	210,000
Sales			
Honolulu	114,800	114,800	86,100
Koppers	48,000	48,000	24,000
Licenses	72,000	72,000	72,000
CCA Customers	24,000	48,000	24,000

### VIII. Meetings & Travel

June 8 Vacation Day  
June 13-Valparaiso  
July 3 Dow Sales Ferrell  
July 5 Aetna Insurance inspection  
July 9 week - Internal auditors St. Louis  
July 16-17 - Internal auditors Valparaiso  
July 23 week - Valparaiso (Schultz vacation)  
July 30-31 Vacation days  
August 20 week- vacation

R. F. Simmons

RFS/pds

TOLS005156

# KOPPERS

## Interoffice Correspondence

To F. M. Klesnick  
 Location K-1001  
 Subject June 1979 Operating Expenses

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date July 8, 1979

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries, Wages & Benefits	13671	3603	1869	
Office Expense	1092	854		
Travel Expense	282	146	693	
M & R	1083	3255	1454	
Direct Supply	356	101	2321	12544
Fuel & Power	120	795		
Indirect Expense	441	406	6	
Consulting & Prof. Svcs.	175			
Sub., Dues & Donations	190			
Depreciation	1834	3234	4731	
Insurance/Taxes	3523	778	100	103
Misc. Expense	503	11		2400
Misc Income				
Pumps	403			
Whse 170/390/395	2876			
Total Expenses	26549	13183	7823	15047
Absorbed	24286	23440	16922	24060
<u>Estimates</u>				
July expenses	27000	13800	8800	18000
Absorbed	22000	25080	15900	23976
Aug. expenses	31000	13000	11000	20000
Absorbed	26000	21987	16200	26973
Sept. Expenses	26000	13500	11000	16000
Absorbed	24500	21987	16900	20979

TOLS005157

# KOPPERS

cc: Jonette Wharton  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report July 1979

From R. F. Simmons  
Location St. Louis, Missouri  
Date August 1, 1979

### St. Louis, Missouri Plant & WTC Operations

#### 1 Shipments July Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtax Preprime Conc.	3 X 55 Gal.
Woodtax Preprime RTU	8 X 55 Gal.
Woodtax 140 Conc.	10 X 55 Gal.
Woodtax 140 RTU	10 X 55 Gal.
Woodtax S Conc.	10 X 55 Gal.
Penta Wood Pres. Conc.	5 X 55 Gal.
Penta Wood Pres. Conc.	2 X 5 Gal.
Penta Wood Pres. RTU	1 X 5 Gal.
Penta Stain #509	6 X 55 Gal.
Liquid Noxtane I	6 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane SSI	20 X 55 Gal.
Liquid Noxtane I	16 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.
KIB Beam Sealer	10 X 55 Gal.
End Spray 400 Green	10 X 5 Gal.
Lumbrella 33 Redwood S	2 X 55 Gal.
Lumbrella 33 Redwood S	243 X 3 Gal.
Lumbrella 33 Redwood H	27 X 3 Gal.
Lumbrella 15 Redwood	5 X 53 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane SSI	11 X 55 Gal.
Liquid Noxtane I	10 X 55 Gal.
Timbertreat 625 Conc.	1 X 55 Gal.
Penta Wood Pres. Conc.	12 X 55 Gal.
WTC #71	6 X 515 Lbs.
End Spray 400 Red/Orange	9 X 55 Gal.
Lumbrella 33 Clear	24 X 55 Gal.
Lumbrella 33 Redwood S	9 X 55 Gal.

TOLS005158

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

Lumbrella 33 Yellow	76 X 3 Gal.
Lumber Coat Conc. Yellow	2 X 55 Gal.
Lumber Coat Conc. Yellow	81 X 3 Gal.

### (4) Newark, California Warehouse

Liquid Noxtane SSI	35 X 55 Gal.
Liquid Noxtane SSI	3 X 345 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime T RTU	85 X 55 Gal.
Woodtox Preprime T RTU	10408 Gal Bulk
Woodtox 140 T Conc.	12 X 55 Gal.
Woodtox 140 T RTU	996 Gal. Bulk
Redy Coat Penta Conc.	11 X 55 Gal.
Redy Coat Penta RTU	38 X 55 Gal.
Timbertox-40 Conc.	35 X 55 Gal.
WK 60 Solvent	8 X 55 Gal.
WR 340 Conc.	9 X 408 Lbs.
Petroset II	6 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	29623 Gal. Bulk
Woodtox Preprime RTU	15 X 55 Gal.
Woodtox Preprime Conc.	7 X 55 Gal.
Woodtox 140 RTU	300 Gal. Bulk
Woodtox 140 RTU	5 X 55 Gal.
Woodtox 152 RTU	1 X 55 Gal.
Woodtox RTU	3 X 55 Gal.
Woodtox RTU	289 X 5 Gal.
Timbertox D-5	2 X 55 Gal.
WR 340 Conc.	48 X 400 Lbs.
Penta Wood Pres. Conc.	25 X 55 Gal.
Penta Wood Pres Conc.	1 X 5 Gal.
Penta Wood Pres. RTU	2 X 55 Gal.
Penta Wood Pres. RTU	8 X 5 Gal.

TOLS005159

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Ginco RTU	50 X 5 Gal.
Penta Stain Conc.	10 X 55 Gal.
Penta Wood Pres. RTU	5900 Gal. Bulk
Wood Treat EA	3 X 40 Lbs.
Liquid Noxtane SSI	3 X 55 Gal.
Liquid Noxtane I	8 X 55 Gal.
Timbertreat 625 Conc.	4 X 55 Gal.
Timbertreat 625 Conc.	9 X 5 Gal.
Holman Prestain Redwood Conc.	2 X 55 Gal.
Holman Prestain Cedar Conc.	1 X 55 Gal.
WK 60 Solvent	65 X 55 Gal.
WTC #71	4 X 515 Lbs.
Anstrik Blue Conc.	2 X 5 Gal.
KLB Beam Sealer	12 X 55 Gal.
Clear end Sealer	1 X 55 Gal.
Clear End Sealer	1 X 53 Gal.
Clear End Sealer	1 X 5 Gal.
Red End Sealer	1 X 54 Gal.
Wood Seal Wax	1 X 420 Lbs.
Lumbrella 33 Redwood S	54 X 3 Gal.
Lumbrella 25 Cherrytone	8 X 55 Gal.

### Penta Shipments July Calendar Month Lbs.

To	<u>Supplier</u>	Sales				July Comparison		
		<u>Reichhold</u>	<u>Vulcan</u>	<u>Dow</u>	<u>WTC</u>	<u>Total</u>	<u>1978</u>	<u>1977</u>
FPD	95,620	40,000*	525,380*	-		661,000*	280,815	335,220
Customer	132,800	40,000*	163,249*	61,250		397,299	389,047	360,787
WTC	209,630	-	-	(61,250)	148,380	205,070	91,900	
	438,050	80,000	588,629	61,250	1,206,679	874,932	787,907	

\*Subject to correction pending correct block/bulk weights of last days of month & final Vulcan shipping info.

TOLS005160

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### Invoicing July Accounting Month \$

	<u>Profit \$</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
FPD Penta	14.1	252,810	104,223	126,890
Customer Penta	15.1	63,361	263,944	194,255
WTC Products	22	122,767	283,841	222,525
KCCA-C	15	36,676	72,957	-
KCCA-B	18	45,050	59,742	-
Total		<u>522,664</u>	<u>652,088</u>	<u>543,990</u>
		<u>571637</u>		

### II Materials

Penta - At About monthly intervals Dow continues to be plagued with operating problems which causes us loss of product to customers. The problem is manufacture of blocks that are either soft or ooze liquid. These blocks then are not salable to customers and have to be taken into our plants.

Reichhold is having a difficult time of trying to maintain production and yet get their normal plant maintenance plus expansion work done. So far, they still are ahead of their 1979 commitment to us, and are our most reliable penta supplier.

One word describes Vulcan - undependable.

Solvents & chemicals - there is no leveling off of price increases and we are trying to monthly update product costs that are affected.

### III Inventory

June closing	614,164
July purchases	153,064
Raw material	143,835
Containers	9,229
Penta 1408	(327,845)
Penta 1414	(112,719)

TOLS005161

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

July material converted to products	196,195
July estimated cost products sold	159,650
July estimated closing inventory	607,578
August estimated closing	625,000
September estimated closing inventory	610,000
October estimated closing inventory	590,000

### IV Sales Forecast \$

	Expected \$ Profit	FRANK		October
		August	September	
FPD Penta	330,000	14.6	275,000	300,000
Customer Penta	255,000	15	220,000	240,000
WTC Products	185,000	22	(TO 175) 200,000	175,000
KCCA-B	45,000	18	60,000	45,000
KCCA-C	71,000	16.5	40,000	70,000

### V St. Louis General Comments

AFE's - No capital expenses

Medical activity - none

	1979	1978
Salaried	5	4
Hourly	5	6

### VI Valparaiso Mix Plant

(Oxide Lbs.)	Produced	Shipped
Domestic	487,500	471,640
Koppers-Hickson	262,500	267,540

Inventory	July	143,294
	Aug.	175,000
	Sept.	210,000
	Oct	180,000

Medical activity - Greg Kent was treated during the month for strained back muscles.

REV. 5 100M 8-77

100M 8-77

TOLS005162

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### Production Schedule (Oxide Lbs.)

	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>
Domestic Koppers-Hickson	487,500 262,500	412,500 225,000	412,500 225,000
Anticipated Sales			
Domestic Koppers-Hickson	480,000 260,000	420,000 220,000	400,000 220,000

Trucking - See G. Schultz report. We are operating a second unit on a daily rental unit which is a real back-breaker; need help with Traffic Dept.

Employee Status	July	<u>1979</u>	<u>1978</u>
Salaried		2	1
Hourly		1	2
Trucking		2	1
		5	4

NIOSH and their contractor visited July 24; we believe this visit went well.

### VII Newark Mix Plant (Oxide Lbs.)

	<u>Produced</u>	<u>Shipped</u>	<u>Shipments</u>
	306,762	281,375	Honolulu 8 containers Exterior 2 trucks K- Ontario 2 trucks K- Oroville Pacific Wood Selma

Inventory	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>
	169,444	190,000	226,000	190,000
Containers	11,786			

TOLS005163

KOV

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

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### Projection of Production/Sales - Oxide Lbs.

	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>
Production	270,000	210,000	240,000
Sales			
Honolulu	114,800	86,100	86,100
Koppers	48,000	24,000	48,000
Licensees	72,000	72,000	72,000
CCA Sales	48,000	24,000	24,000

### VIII Meetings & Travel

July 5 - St. Louis Aetna Ins. Inspection  
July 9-13 & 18-20 St. Louis Internal auditors  
July 19 Valpo  
July 23-27 Valpo (Schultz vacation)  
August 13-17 Vacation  
August 30 1 day Vacation

R. F. Simmons

RFS/pds

TOLS005164

00M 8-77

BZTO104(e)041985

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K1001  
 Subject July 1979 Operating Expenses

From R. F. Simmons  
 Location St. Louis, Mo.  
 Date August 1, 1979

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	15,608	4,711	6,195	-
Office Expense	1,343	691	-	-
Travel Expense	195	313	835	-
M & R	325	108	-	-
Direct Supply	425	355	2,624	16,845
Fuel & Power	*8,455	-	-	-
Indirect Expense	526	530	-	-
Consulting & Prof. Services	175	-	-	-
Subscriptions Dues/Donations	-	-	-	-
Depreciation	1,834	3,234	1,731	-
Insurance/Taxes	3,577	789	1,609	103
Misc. Expense	2,345	188	2,632	2,400
Misc. Income	(173)	-	-	-
Warehouses 170/390/395	3,551	-	-	-
Total Expense	38,186	10,919	15,626	19,348
Absorbed	24,286	31,350	25,308	30,703
Estimates				
August Expenses	30,000 33	14,000	18,000	18,200
Absorbed	29,000	31,350	25,000	27,000
September Expenses	26,000	15,000	17,500	15,900
Absorbed	24,500	26,650	25,000	21,000
October Expenses	30,000	15,500	17,500	15,200
Absorbed	28,500	26,650	22,000	24,000

RFS/pds

R. F. Simmons

TOLS005165

cc: Jonette Wharton  
Frank Klasnick  
J. R. Brummett/Ken Cogan  
G. A. Schultz/Wayne Simkins  
Pam Armbruster  
**ERIC YEADON**

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, MO.

Subject Monthly Report August 1979

Date September 4, 1979

### St. Louis, Missouri Plant & WTC Operations

#### L. Shipments August Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.  
Woodtox RTU

2 X 55 Gal.  
2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I  
Liquid Noxtane SSI  
Timbertreat 625  
Lumbrella 15 Redwood  
Lumbrella 25 Brown  
Lumbrella 33 Clear  
Lumbrella 33 Yellow S  
Lumbrella 33 Redwood S  
Lumbrella 33 Redwood S  
Green End Spray 400  
Red End Spray 400  
Red Orange End Spray 400  
Red End Sealer

28 X 55 Gal.  
17 X 55 Gal.  
4 X 55 Gal.  
1 X 53 Gal.  
10 X 55 Gal.  
10 X 55 Gal.  
54 X 3 Gal.  
2 X 55 Gal.  
162 X 3 Gal.  
16 X 5 Gal.  
1 X 5 Gal.  
3 X 55 Gal.  
1 X 54 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I  
Liquid Noxtane SSI  
Timbertreat 625  
Lumbrella 33 Clear  
Lumber Coat Conc.  
Lumber Coat Conc.  
Red Orange End Spray 400  
Red End Spray 400  
Green End Spray 400  
WTC #71

14 X 55 Gal.  
15 X 55 Gal.  
8 X 55 Gal.  
9 X 55 Gal.  
27 X 3 Gal.  
1 X 55 Gal.  
7 X 55 Gal.  
3 X 55 Gal.  
2 X 55 Gal.  
2 X 515 Lbs.

TOLS005166

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	1 X 330 Gal.
Liquid Noxtane SSI	7 X 345 Gal.
Liquid Noxtane SSI	85 X 55 Gal.
Liquid Azide 200	30 X 55 Gal.
Clear End Sealer	1 X 262 Gal.
Clear End Sealer	1 X 300 Gal.
Clear End Sealer	10 X 55 Gal.

### (5) Portland, Oregon Blender

Redy Coat Penta Conc	7 X 55 Gal.
Redy Coat Penta RTU	42 X 55 Gal.
Woodtox 140 T Conc.	2 X 55 Gal.
Woodtox Preprime T RTU	9880 Gal. Bulk
Woodtox Preprime T RTU	80 X 55 Gal.
Timbertox 40 Conc.	40 X 55 Gal.
WR 340 Conc.	30 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	28528 Gal. Bulk
Woodtox RTU	4946 Gal. Bulk
Penta Wood Pres Conc.	4259 Gal. Bulk
Penta Wood Pres. RTU	5960 Gal. Bulk
Woodtox Preprime Conc.	6 X 55 Gal.
Woodtox Preprime RTU	33 X 55 Gal.
Woodtox RTU	16 X 55 Gal.
Woodtox RTU	314 X 5 Gal.
Woodtox 140 Conc.	30 X 55 Gal.
Woodtox 140 RTU	1 X 55 Gal.
Woodtox 140 RTU	1 X 5 Gal.
Penta Wood Pres Conc.	39 X 55 Gal.
Penta Wood Pres. Conc.	1 X 5 Gal.
Penta Wood Pres. RTU Dark	5 X 55 Gal.
Penta Wood Pres. RTU	16 X 55 Gal.
Penta Wood Pres. RTU	42 X 5 Gal.

TOLS005167

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Timbertox D-5	20 X 55 Gal.
WTC #71	11 X 515 Lbs.
WTC #74	3 X 460 Lbs.
Liquid Noxtane	7 X 55 Gal.
Liquid Noxtane SSI	52 X 55 Gal.
Timbertreat 625	3 X 55 Gal.
Timbertreat 625	1 X 5 Gal.
KLB Beam Sealer	2 X 55 Gal.
Clear End Sealer	2 X 55 Gal.
Clear End Sealer	4 X 53 Gal.
Color Coat Conc. Brown	2 X 55 Gal.
Penta Stain #02	2 X 55 Gal.
Penta Stain 502	16 X 5 Gal.
Penta Stain #04	2 X 55 Gal.
Penta Stain 506	6 X 55 Gal.
Woodtreat AA	1 X 220 Lbs.
Woodtreat AA	50 X 40 Lbs.
Poletox	69 X 57 Lbs.
Coppertreat 00	96 X 1 Gal.

### Penta Shipments August Calendar Month Lbs.

To	Supplier	August Comparison				
		1978	1977	Total	WTC	Vulcan
FPD	Reichhold	139,840	39,370	498,495	0	677,705
Customer		85,330	40,000	263,938	50,500	439,768
WTC		115,000	14,840	0	(50,500)	79,340
Total		340,170	94,210	762,433	0	1,196,813

### Invoicing August Accounting Month \$

	Profit \$	1979	1978	1977
FPD Penta	14.2	356,041	251,669	288,037
Customer Penta	15	267,267	171,242	239,978
WTC Products	22	276,654	300,579	299,223
KCCA-C	14	104,679	-	-
KCCA-B	16	46,344	-	-
Total		1,050,986	723,490	827,238

TOLS005168

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### II. Materials

Penta - Dow has had quality problems with loads at Gainesville and Grenada. Gainesville's problem is most likely as much an oil problem as poor quality penta but we expect Dow to take back most of one load. The Grenada problem is contamination with dichlorophenol and Dowtherm; Dow will issue credit.

Dow is not producing one thousand pound blocks as desired; we need help to get this changed. There is currently plenty of production to meet demand in blocks, but not in the right size.

Reichhold has likewise produced poor quality penta. This is attributable to low grade phenol and chloring production. Unfortunately penta prill production remains far below demand to compound our problems. We are still receiving our quota from Reichhold, but could use and/or sell twice as much in prills.

Solvents - Still increasing monthly. Some majors are reducing or eliminating mineral spirits and certain aromatics to throw that material into jet fuel and gasoline.

### III. Inventory

July Closing		624,356
August Purchases		126,427
Raw Materials	116,692	
Containers	9,735	
Penta -1408	(268,641)	
Penta -1414	(116,186)	
August Material Converted to Product		187,913
August estimated cost products sold		215,500
August estimated closing inventory		535,283
September estimated closing inventory	550,000	637 LIFO
October estimated closing inventory	550,000	610
November estimated closing inventory	525,000	580
December estimated closing inventory	525,000	525

TOLS005169

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### IV. Sales Forecast

	Sept.	Expected % Profit	Oct.	Nov.	Dec.
FPD Penta	350,000	14.5	200,000	260,000	150,000
Customer Penta	180,000	15	120,000	140,000	85,000
WTC Products	220,000	22	200,000	175,000	160,000
KCCA-B	45,000	16	45,000	45,000	18,000
KCCA-C	46,000	14	66,000	46,000	45,000

Note: Penta demand (for blocks) is falling dramatically in recent days, Koppers plants are curtailing treatment and penta block customers are exercising caution in buying. We are not able to take all the Dow production available.

### V. St. Louis General Comments

AFE's - No capital expenses

Major elevator repair in August \$3171

Medical activity - none

Employee Status	1979	1978
Salaried	5	4
Hourly	5	7

### VI. Valparaiso Mix Plant

(Oxide Lbs.)	Produced	Shipped
Domestic	450,000	463,520
Koppers-Hickson	300,000	288,770

Inventory	August	144,220
	September	175,000
	October	175,000
	November	150,000
	December	150,000

Medical Activity - None

TOLS005170

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

Production Schedule	Sept.	Oct.	Nov.	Dec.
Domestic	225,000	262,500	225,000	140,000
Koppers-Hickson	187,500	187,500	187,500	180,000

Anticipated Sales			
Domestic	240,000	260,000	240,000
Koppers-Hickson	200,000	200,000	200,000

Valpo product demand has slackened noticeably in the last ten days.

Trucking - See G. Schultz monthly report. Flat bed trailer now received, being licensed and as soon as sides are received, we will be using it.

Employee Status	August	1979	1978
Salaried		2	1
Hourly		1	2
Trucking		2	1
		5	4

New kettle's agitator being installed. #1 kettle has two pin hole leaks in bottom dish. Dish was originally .25 thickness, October 1978 averaged .174, is now .16; adjacent to the pin holes, thickness is .131 and .160. Bottom side wall has also lost enough metal to consider its replacement. Harry Fry, Orrville, has separate report on kettle thickness following.

The city of Valparaiso has not responded to us regarding waste disposal from chromic acid manufacture, nor have they responded to our tracing calls.

During August AFE's #5035, 5037, 5038, and 5002 were closed -\$135,000. In September, the following should close:

#5036 Wolmanac reactor	#5043 Fuel Oil Tank
#5029 Tank Trailer	#5044 Flat Bed Trailer

TOLS005171

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

### VII. Newark Mix Plant

Oxide Lbs.	Produced	Shipped	Shipments
	321,733	305,265	Honolulu 8 containers Pacific, Elmira 2 Exterior 2 Mc Farland Selma K-Ontario Dant Russell Pacific, Ridgefield

### Inventory

August	\$136,834	Containers \$15,148
September	175,000	" 10
October	170,000	" 10
November	160,000	" 10
December	150,000	" 10

### Projection of Production/Sales - Oxide Lbs.

	Sept.	Oct.	Nov.	DFC
Production	210,000	210,000	150,000	140,000
Sales	250,100	234,800	153,400	
Honolulu	86,100	114,800	57,400	
Koppers	24,000	48,000	24,000	
Licensees	96,000	48,000	48,000	
CCA Sales	24,000	24,000	24,000	

### VIII. Meetings & Travel

Aug. 2 & 3 - Pittsburgh SWC Management  
Aug. 9 - Valparaiso  
Aug. 20-24 - Vacation  
Aug. 28 & 29 - K. Cogan, D. Jackson at St. Louis  
Sept. 5 - Goydan at St. Louis  
Sept. 12 or 13 - Valparaiso  
Sept. 17 18 & 19 - Newark

R. F. Simmons

TOLS005172

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K-1001  
 Subject August 1979 Operating Expenses

From R. F. Simmons  
 Location St. Louis, MO.  
 Date September 5, 1979

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	14250	3973	4520	
Office Expenses	783	659		
Travel Expenses	1224	423	1387	
M & R	4776	2760	2225	
Direct Supply	1521	2525	3846	16407
Fuel & Power	227	1651		
Indirect Expense	455	449	-6	
Consult. & Prof. Svcs.	175	30		
Subs. Dues & Donations	75			
Depreciation	1834	3234	1731	
Ins./Taxes	4695	1632	1630	103
Misc. Expense	390	873		3396
Misc. Income	(1069)			
Whse. 170/390/395	5808			
Pumps	729			
AFE Expenses in Aug.		(4481)		
Total Expenses	35873	18209	15376	19906
August Absorbed	28032	30881	30650	32176
September Expenses	32000	14000	16000	16000
Absorbed	29000	17243	20000	20979
October Expenses	29000	14000	14000	15500
Absorbed	23000	18810	18000	20979
November Expenses	30000	13500	17000	10500
Absorbed	25000	17243	22000	15000

R. F. Simmons

TOLS005173

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
G. A. Schultz  
Pam Arnsbruster  
J. R. Brummett/Ken Cogen

# KOPPERS

## Interoffice Correspondence

To: J. D. Hite  
Re: K-1001  
Subject: Monthly Report September 1979

From: R. F. Simmons  
Location: St. Louis, MO.  
Date: October 1, 1979

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments September Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtax Preprime RTU	2 X 55 Gal.
Woodtax 140 RTU	2 X 55 Gal.
Penta Wood Pres. Conc.	4 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I	15 X 55 Gal.
Liquid Noxtane SSI	17 X 55 Gal.
Timbertreat 625 Conc.	6 X 55 Gal.
KLB Beam Sealer	10 X 55 Gal.
Lumbrella 15 Redwood	4 X 55 Gal.
Lumbrella 33 Clear	6 X 55 Gal.
Lumbrella 33 Redwood S	3 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 33 Redwood H	27 X 3 Gal.
Lumbrella 33 Yellow S	54 X 3 Gal.
Woodtax 140 RTU	1 X 5 Gal.
Red Orange End Spray 400	4 X 55 Gal.
Red End Spray 400	11 X 5 Gal.
Green End Spray 400	6 X 5 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	12 X 55 Gal.
Liquid Noxtane SSI	11 X 55 Gal.
Timbertreat 625 Conc.	6 X 55 Gal.
Lumber Coat Conc. Yellow	11 X 55 Gal.
Lumbrella 33 Clear	20 X 55 Gal.
Lumbrella 33 Redwood S	9 X 55 Gal.
Lumbrella 25 Cherry Tone	15 X 55 Gal.
Lumbrella 33 Yellow S	1 X 55 Gal.

TOLS005174

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

Lumbrella 33 Yellow S  
Red End Spray 400  
Red Orange End Spray 400

27 X 3 Gal.  
2 X 55 Gal.  
3 X 55 Gal.

### (4) Newark, California Warehouse

Liquid Noxtane SSI  
Liquid Noxtane SSI  
Liquid Azide 200  
Clear End Sealer  
Clear End Sealer  
Orange End Sealer

14 X 345 Gal.  
55 X 55 Gal.  
1 X 55 Gal.  
2 X 300 Gal.  
16 X 55 Gal.  
10 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtax Preprime T RTU  
Woodtax Preprime T RTU  
Woodtax 140T RTU  
Woodtax 140 T Conc.  
Timbertox 40 Conc.  
Timbertox 40 Conc.  
WK 60 Solvent  
Redy Coat Penta RTU  
Redy Coat Penta Conc.  
Petroset II

7512 Gal. Bulk  
86 X 55 Gal.  
3086 Gal. Bulk  
13 X 55 Gal.  
4004 Gal. Bulk  
3 X 55 Gal.  
6 X 55 Gal.  
21 X 55 Gal.  
7 X 55 Gal.  
6 X 460 Lbs.

### (6) St. Louis, Missouri Plant

Woodtax Preprime RTU  
Woodtax Preprime RTU  
Woodtax Preprime Conc.  
Woodtax 140 RTU  
Woodtax 140 RTU

20105 Gal. Bulk  
32 X 55 Gal.  
27 X 55 Gal.  
1 X 55 Gal.  
2 X 5 Gal.

TOLS005175

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Woodtax 140 Conc.	84 X 55 Gal.
Woodtax RTU	1 X 55 Gal.
Woodtax RTU	145 X 5 Gal.
Timbertax D-5	5 X 55 Gal.
Penta Wood Pres. Conc.	54 X 55 Gal.
Penta Wood Pres. Conc.	7 X 5 Gal.
Penta Wood Pres. RTU	8 X 55 Gal.
WR 340 Conc	60 X 400 Lbs.
Woodtreat AA	1 X 220 Lbs.
Wk 60 Solvent	23 X 55 Gal.
WTC #71	10 X 515 Lbs.
KLB Beam Sealer	15 X 55 Gal.
KLB Beam Sealer	2 X 5 Gal.
Wood Seal Wax	2 X 420 Lbs.
Clear End Sealer	3 X 55 Gal.
Clear End Sealer	3 X 5 Gal.
Wood Sealer Alkyd Resin	4 X 55 Gal.
Liquid Noxtane #	3 X 55 Gal.
Timbertreat 625 Conc.	6 X 55 Gal.
Timbertreat 625 Conc.	1 X 5 Gal.
Lumbrella 33 Yellow S	50 X 55 Gal.
Penta Stain #502	38 X 5 Gal.
Penta Stain #505	9 X 5 Gal.
Penta Stain #507	2 X 5 Gal.
Penta Stain #508	5 X 5 Gal.

To	Penta Shipments September Calendar Month Lbs.				Sept. Comparison		
	F-Techloid	Vulcan	Dow	WTC	Total	1978	1977
FPD	98,380	50,580	289,525	-	428,485	663,810	546,334
Customer	86,180	40,000	115,795	81,750	323,725	708,645	271,748
WTC	130,140	25,000*	-	(81,750)	73,390	87,305	139,000
Total	314,700	105,580	405,320	-	825,600	1,459,760	957,082

\*Estimated

TOLS005176

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### Invoicing September Accounting Month \$

	<u>Profit%</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
FPD Penta	13.7	297,589	169,985	244,571
Customer Penta	14.8	173,927	206,430	144,207
WTC Products	20.5	244,593	238,776	238,724
KCCA-C	14	83,419	-	-
KCCA-B	16	46,182	-	-
Total		845,710	615,191	627,502

### II. Materials

Penta - Vulcan & Dow at .53/Lb. Oct. 1; Reichhold to .53/Lb. October 8. Dow, as of this writing, still not producing 1000 Lb. blocks; operations and market manager (Steve Martin) stalled, St. Louis liaison non-committal and Fred Sullivan upset and dismayed at Dow's lack of response. Plenty of 2000 Lb. blocks available; customer and Koppers' plant requirements slow. Demand is still exceeding supply on prill form and out total take from Reichhold except for Canadian shipments is in prills.

Solvents- Shell has announced 10¢/gallon increases for November 1 most grades mineral spirits; other producers will follow. KB-3, B-6 and B-GHB all advanced 18-20%.

Other notable increases:

Lithium Hydroxide (LN-SSI)	up 13¢/Lb.
Filtrez (Lumbrellas)	up 2¢/Lb.
Acetone (LN-SSI & I)	up 4 ¢/Lb.
Caustic (solid) (LN-SSI & I)	up 1¢/Lb.
Citric Acid (LN-SSI & I)	up 6¢/Lb.
Isopropanol (LN-SSI & I)	up 15¢/Gal.
Ethylene Glycol (LN-SSI & I)	up 3¢/Lb.
Drums/Pails	up 4 to 5%

TOLS005177

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### III. Inventory

August closing	Product	541,417
September purchases		168,196
Raw materials	149,869	
Containers	18,327	
Penta-1408	(281,491)	
Penta-1414	(117,024)	
September material converted to product		170,353
September estimated cost products sold		194,500
September estimated closing inventory		515,313
October estimated closing inventory		515,000
November estimated closing inventory		525,000
December estimated closing inventory		525,000

### IV. Sales Forecast

Customer	Oct.	Expected \$ Profit	Nov.	Dec.
FPD Penta	287,000	14.5	260,000	150,000
Customer Penta	96,000	15	140,000	85,000
WTC Products	200,000	20	175,000	160,000
KCCA-B	18,000	16	36,000	18,000
KCCA-C	45,000	14	46,000	45,000

### V. St. Louis General Comments

No AFE's, no capital expenses.

Double check valve installed on main water service line to meet city regulation.  
Medical activity - E. Floretta to doctor complaining groin pain; has returned to duty, but still undergoing examination and treatment.

Employee status	1979	1978
Salaried	5	4
Hourly	5	7

TOLS005178

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

### VI. Valparaiso Mix Plant

Oxide Lbs.  
Domestic  
Koppers-Hickson

<u>Produced</u>	<u>Shipped</u>
262,500	288,970
225,000	224,155

Inventory	Sept. 142,403
	Oct. 175,000
	Nov. 200,000
	Dec. 150,000

Medical activity- none

<u>Production Schedule</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Domestic	262,500	225,000	150,000
Koppers Hickson	187,500	225,000	187,500

Anticipated Sales	
Domestic	240,000
Koppers-Hickson	200,000

Trucking- See G. Schultz monthly report.  
L. Stewart discharged Sept. 27

### Capital expenses - Closed in September

#5038 Holmanac Reactor	\$49,308
#5043 Fuel Oil Tank	8,322
#5044 Flat bed trailer	12,727

Open AFE's	Anticipated closing
#5029 Tank Traller	Nov. '79
#5056 #1 Reactor repair	Feb. '80

TOLS005179

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

### VII. Newark Mix Plant

Oxide Lbs.	Produced
	191,704

Shipped
202,880

Honolulu 6 containers  
Exterior 2  
Pacific Wood - Ridgefield  
Pacific Wood- Elmira  
K-Ontario

### Inventory

Sept. 160,231	Containers	6453
Oct. 185,000		
Nov. 175,000		
Dec. 160,000		

### Projection of Production/Sales - Oxide Lbs.

	Oct.	Nov.	Dec.
Production	210,000	150,000	150,000
Sales	234,800	153,400	153,400
Honolulu	114,800	57,400	57,400
Koppers	48,000	24,000	48,000
Licensees	48,000	48,000	48,000
CCA Sales	24,000	24,000	-

### VIII. Meeting/Travel

Sept. 5 - P. Goydan at St. Louis  
Oct. 3 - Valparaiso  
Oct. 10 - Valparaiso  
Oct. 11-12 - Vacation  
Week Oct 29- California

R. F. Simmons

RFS/pds

TOLS005180

KOPPERS

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject September 1979 Operating Expenses

Date October 1, 1979

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo</u>	<u>Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	15638	3724		3814	
Office Expenses	1286	978			
Travel Expense	498	276		770	
M & R	234	1810		71	
Direct Supply	780	413		4882	11023
Fuel & Power	186	863			
Indirect Expense	491	148		6	
Consult. & Prof Svcs.	135				
Subs. Dues & Donations	39				
Depreciation	1834	3234		1731	
Ins./Taxes	1416	356		531	745
Misc Expense	495	93		2203	60
Misc Income	345				
Whse 170-390-395	2831				
Pumps	323				
AFE Expense In Sept.		9745		10667	
Total Expenses	26346	11895	15508		11828
Sept. Absorbed	32736	20343	17644		19186
Oct. Expenses	29000	14000	14000		15500
Absorbed	23000	18810	18800		20979
Nov. Expenses	30000	13500	17000		10500
Absorbed	25000	17243	22000		15000
Dec. Expenses	28000	13500	16000		10500
Absorbed	24000	17000	21000		15000

R. F. Simmons

TOLS005181

cc: Jonette Wharton  
Frank Klesnick  
Eric Yeadon  
G. A. Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. J. Hite  
Location F1001  
Subject Monthly Report October 1979

From R. F. Simmons  
Location St. Louis, Mo.  
Date November 2, 1979

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments October Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime Conc.	7 X 55 Gal.
Woodtox Preprime RTU	2 X 55 Gal.
Penta Stain #509	2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I	12 X 55 Gal.
Liquid Noxtane SS1	8 X 55 Gal.
Timbertreat 625	3 X 55 Gal.
Lumbrella 15 Yellow	9 X 55 Gal.
Lumbrella 25 Brown	10 X 55 Gal.
Lumbrella 33 Clear	27 X 3 Gal.
Lumbrella 33 Clear	4 X 55 Gal.
Lumbrella 33 Cherry	20 X 55 Gal.
Lumbrella 33 Redwood S	162 X 3 Gal.
Lumbrella 33 Redwood S	10 X 55 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	7 X 55 Gal.
Liquid Noxtane SS1	3 X 55 Gal.
Timbertreat 625	12 X 55 Gal.
Lumber Coat Conc. Yellow	27 X 3 Gal.
Lumbrella 33 Clear	13 X 55 Gal.
Lumbrella 33 Redwood S	4 X 55 Gal.
Lumbrella 33 Yellow S	22 X 3 Gal.
Red Orange End Spray 400	5 X 55 Gal.

TOLS005182

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxane SSI	4 X 345 Gal.
Liquid Noxane SSI	19 X 55 Gal.
Liquid Azide 200	4 X 55 Gal.
Clear End Sealer	6 X 55 Gal.
Red End Sealer	4 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime T RTU	16981 Gal. Bulk
Woodtox 140 T RTU	1 X 55 Gal.
Timbertox 40 Conc.	50 X 55 Gal.
Redy Coat Penta RTU	56 X 55 Gal.
Redy Coat Penta Conc.	10 X 55 Gal.
WR 340 Conc.	12 X 408 Lbs.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	44210 Gal. Bulk
Woodtox Preprime RTU	84 X 55 Gal.
Woodtox Preprime Conc.	3 X 55 Gal.
Woodtox Preprime Conc.	1 X 5 Gal.
Woodtox 140 RTU	3993 Gal. Bulk
Woodtox 140 RTU	6 X 55 Gal.
Woodtox 140 Conc	20 X 55 Gal.
Woodtox RTU	1 X 5 Gal.
Timbertox D-5	1 X 55 Gal.
Penta Wood Pres. Conc.	4288 Gal. Bulk
Penta Wood Pres. Conc.	10 X 55 Gal.
Penta Wood Pres. RTU	48 X 55 Gal.
Penta Wood Pres RTU	72 X 5 Gal.
Ginn Penta Wood RTU	50 X 5 Gal.

TOLS005183

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Poletox	110 X 57 Lbs.
Tritox	10 X 348 Lbs.
Tritox	2 X 57 Lbs.
Woodtreat AA	1 X 40 Lbs.
WTC #71	8 X 515 Lbs.
WTC #71	3 X 42 Lbs.
Liquid Noxtane I	3 X 55 Gal.
Liquid Noxtane I	1 X 5 Gal.
Timbertreat 625	5 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
Clear End Sealer	9 X 53 Gal.
Red End Sealer	4 X 5 Gal.
Green End Spray 400	18 X 5 Gal.
Wood Sealer Alkyd Resin	1 X 5 Gal.
Lumber Coat Conc.	7 X 55 Gal.
Wolman Prestain Conc. Cedar	2 X 5 Gal.
Anstrik Blue Conc.	4 X 5 Gal.
Penta Stain #502	3 X 55 Gal.
Lumbrella 33 Yellow S	54 X 3 Gal.
Lumbrella 25 Brown	1 X 55 Gal.

### Penta Shipments October Calendar Month Lbs.

To	Reichhold	Vulcan	Dow	WTC	Total	Comparison October
FPG	96,300	39,400	315,333		451,033	524,800 1978 419,860 1977
Customers	86,260		75,079	46,650	206,989	449,708 1978 126,832 1977
WTC	169,750	28,000	-	(45,650)	152,100	48,750 1978 23,900 1977
Totals	352,310	67,400	390,412	-	810,122	1,023,258 1978 578,592 1977

### Invoicing October Accounting Month \$

	\$Profit	1979	1978	1977
FPG Penta	14.9	331,893	336,008	139,488
Customer Penta	16.5	185,193	320,173	83,979
WTC Products	19.8	213,149	217,002	182,883
K-CCA-C	14	65,516	71,945	-
K-CCA-B	16	15,905	-	-
Totals		731,657	945,127	406,350

TOLS005184

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5  
-4-

### I. Materials

Penta - Demand has dropped to the point there are no pressing problems; however the two persistent problems are still with us - (1) Dow has never got to producing molded 1000 Lb. blocks and (2) there is still need of more prilled penta in bags since most treaters are still without block dissolvers.

Solvents - Mineral spirits, delivered, will pass \$1.00 per gallon by December 1; other aromatic and aliphatic materials are increasing accordingly. In addition, there are supplier induced shortages by government meddling to increase gasoline & heating oil supply. We anticipate some degree of difficulty during the next four months in maintaining sufficient mineral spirits supply.

### III. Inventory

September closing inventory		540,439
October purchases		124,913
Raw Materials	115,326	
Containers	95,87	
Penta 1408	(224,111)	
Penta 1414	(110,174)	

October material converted to product	165,501
October estimated cost products sold	170,945
October estimated closing inventory	494,407
November estimated closing inventory	515,000
December estimated closing inventory	525,000
January estimated closing inventory	525,000

Salvage value	100,000	100,000	200,000
Inventory reduction	100,000	100,000	100,000

Inventory - Oct. 31, 1967 - to market value, Kitter Energy Company  
Special Agent

Report for Special Agent at the office  
of the FBI, New York, NY, filed Dec. 1, 1967. TADS account number

TOLS005185

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### IV Sales Forecast \$

	Nov.	% Profit	Dec.	Jan.
FPG Penta	175,000	15	150,000	150,000
Customer Penta	80,000	15.3	50,000	50,000
WTC Products	200,000	20	160,000	175,000
K-CCA-B	33,000	16	17,000	17,000
K-CCA-C	50,000	15	25,000	50,000
	538,000		402,000	442,000

### V. St. Louis General Comments

No AFE's - No capital expenses

#### Employee Status

	1979	1978
Salaried	5	4
Hourly	5	7

### VI. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	366,000	286,470
Koppers Hickson	187,500	205,895

#### Inventory

Oct.	156,803
Nov.	166,000
Dec.	175,000

#### Physical Inventory

Jan.	165,000
Contract	165,000

#### No medical activity

#### Production Schedule

Nov.	Dec.	Jan.
Domestic	225,000	187,500
Koppers Hickson	187,500	150,000

#### Sales Projection

Domestic	260,000	200,000	220,000
Koppers Hickson	180,000	160,000	180,000

TOLS005186

Trucking - See G. Schultz monthly report. William Ensign hired Oct. 11, second driver

Capital Expenses - accounting month

9'27/79 "5044 \$2060 FLAT bed TRAILER

THIS account should be closed.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

No other capital expenses. #5029, Tank trailer closing will be in November.  
Employee Status      1979      1978

Salaried	2	2
Hourly	1	2
Trucking	2	1

Physical inventory accomplished October closing without problems.

### VII Newark Mix Plant

Oxide Lbs	Produced	Shipped	Shipments
	<u>255,095</u>	<u>262,895</u>	Honolulu 8 containers
			Utah Wood
			Selma
			K-Ontario
			Pacific Wood -Elmira
			Pacific Wood-Ridgefield
			Exterior

### Inventory

Oct.	193,230	Containers	4558
Nov.	175,000		
Dec.	160,000		
Jan.	175,000		

Physical inventory also taken October closing and without discrepancy of consequence.

	Nov.	Dec.	Jan.
Production	270,000	240,000	180,000
Sales	248,645	292,200	201,400
Honolulu	57,400	172,200	57,400
Koppers	69,000	24,000	24,000
Licensees	98,000	96,000	96,000
CCA Sales	24,245	-	24,000

TOLS005187

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-7-

### VIII. Meeting / Travel

- Oct 4 - St. Louis City Air Pollution Inspection (no problems)
- Oct 11 - Day of vacation
- Oct 22 thru 26 Valparaiso-Schultz vacation
- Oct 25 - insurance pressure vessel inspection (no problems)
- Oct 30 - Pacific Wood-Elimira (for sludge examination)
  - Rheem Drum- Richmond (new West Coast source)
  - Coast States Chemical (End Sealer blender)
- Oct 31- Redding, CA seeking warehousing
- Nov. 1&2 S&G-Jones Hamilton - Inventory CCA, Trucking problems,  
mix variances, etc.
- Nov. 13 R. Stutz - LN-SSI problems due to poor quality penta supply.
- Nov. 12 Plant/office holiday
- Nov. 14/15 Messieurs Davies, Hite & Arsenault St. Louis
- Nov. 15 J. Bretson/Reichhold St. Louis
- Nov 22/23 Plant/office holidays
- Nov 27 Conley
- Nov 28-31 Sales & Management Meeting -Tarpon springs, Fla.

R. F. Simmons

RFS/pds

TOLS005188

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick

From R. F. Simmons

Location K-1001

Location St. Louis, MO.

Subject October 1979 Operating Expenses

Date November 11, 1979

Salaries Wages & Benefits	
Office Expense	
Travel Expenses	
M & R	
Direct Supply	
Fuel & Power	
Indirect Expense	
Consult & Prof Svcs.	
Subs. Dues & Donations	
Depreciation	
Ins./Taxes	
Misc. Expense	
Misc. Income	(563)
Whse 170/390/395	6,054
Pumps	171
AFE Expense	
Total Expense	28,565
Absorbed	21,951
Nov. Expenses	31,000
Absorbed	27,000
Dec. Expenses	28,000
Absorbed	23,000
Jan. Expenses	31,000
Absorbed	29,000

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	14,629	3,846	4,752	
Office Expense	1,238	858		
Travel Expenses	565	265	902	
M & R	1,377	1,692		
Direct Supply	693	416	7,774	14,003
Fuel & Power	382	742		
Indirect Expense	573	232	6	
Consult & Prof Svcs.	175			
Subs. Dues & Donations	74	75		
Depreciation	1,834	3,234	1,731	
Ins./Taxes	1,363	356	134	103
Misc. Expense				
Misc. Income	(563)			
Whse 170/390/395	6,054			
Pumps	171			
AFE Expense			2,060	
Total Expense	28,565	11,716	17,359	14,106
Absorbed	21,951	23,905	21,479	25,535
Nov. Expenses	31,000	15,000	16,000	20,500
Absorbed	27,000	17,242	18,000	27,000
Dec. Expenses	28,000	13,000	17,500	19,000
Absorbed	23,000	14,100	19,000	24,000
Jan. Expenses	31,000	14,500	16,000	14,500
Absorbed	29,000	17,242	17,000	18,000

R. F. Simmons

TOLS005189

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Glenn Schultz  
Pam Armbuster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite  
Location K-1001  
Subject Monthly Report November 1979

From R. F. Simmons  
Location St. Louis, MO.  
Date December 3, 1979

### St. Louis, Missouri Plant & WTC Operations

#### I. Shipments November Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox RTU	2 X 55 Gal.
-------------	-------------

##### (2) Enfield, North Carolina Warehouse

Liquid Noxtane I	22 X 55 Gal.
Liquid Noxtane SSI	8 X 55 Gal.
Timbertreat 625	6 X 55 Gal.
Liquid Azide 200	5 X 55 Gal.
Lumber Coat Conc.	6 X 55 Gal.
Lumbrella 15 Yellow	11 X 55 Gal.
Lumbrella 15 Redwood	9 X 55 Gal.
Lumbrella 33 Redwood	6 X 55 Gal.
Lumbrella 33 Redwood	162 X 3 Gal.
Red Orange End Spray 400	3 X 55 Gal.
Red Orange End Spray 400	6 X 55 Gal.
Green End Spray 400	10 X 55 Gal.
Green End Spray 400	1 X 55 Gal.

##### (3) Atlanta, Georgia Warehouse

Liquid Noxtane I	17 X 55 Gal.
Liquid Noxtane SSI	9 X 55 Gal.
Lumbrella 33 Clear	10 X 55 Gal.
Lumber Coat Conc.	5 X 55 Gal.
Red Orange End Spray 400	2 X 55 Gal.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	5 X 345 Gal.
Liquid Noxtane SSI	113 X 55 Gal.
Liquid Azide 200	2 X 55 Gal.
Clear End Sealer	1 X 262 Gal.
Orange End Sealer	17 X 55 Gal.
Red End Sealer	5 X 55 Gal.

### (5) Portland, Oregon Blender

Woodtox Preprime T RTU	10150 Gal. Bulk
Woodtox 140 T RTU	2999 Gal. Bulk
Woodtox 140 T Conc.	10 X 55 Gal.
Woodtox Preprime T RTU	7 X 55 Gal.
Timbertox 40 Conc.	15 X 55 Gal.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	30023 Gal. Bulk
Woodtox Preprime RTU	5 X 55 Gal.
Woodtox Preprime Conc.	8 X 55 Gal.
Woodtox RTU	5008 Gal. Bulk
Woodtox 140 RTU	28 X 55 Gal.
Woodtox 140 RTU	12 X 5 Gal.
Woodtox 152 RTU	5954 Gal. Bulk
Woodtox 152 RTU	2 X 55 Gal.
Woodtox 152 RTU	5 X 5 Gal.
Penta Wood Pres. Conc.	4204 Gal. Bulk
Penta Wood Pres. Conc.	30 X 55 Gal.
Penta Wood Pres. RTU	10 X 55 Gal.
Poletax	6 X 348 Lbs.
Poletax	120 X 57 Lbs.

TOLS005191

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-3-

Liquid Noxtane SS1	1 X 55 Gal.
Timbertreat 625	2 X 5 Gal.
Petroset 11	8 X 460 Lbs.
WTC #71	12 X 515 Lbs.
WTC #7-11	15 X 39 Lbs.
KLB Beam Sealer	3 X 55 Gal.
Wood Seal Wax	4 X 420 Lbs.
Clear End Sealer	1 X 55 Gal.
Clear End Sealer	4 X 5 Gal.
Red End Sealer	1 X 55 Gal.
Red End Sealer	8 X 5 Gal.
Green End Sealer	5 X 5 Gal.
Wolman Prestain Cedar Conc.	2 X 55 Gal.
Penta Stain #502	15 X 5 Gal.
Penta Stain #503	1 X 5 Gal.
Penta Stain #506	5 X 5 Gal.
Penta Stain #509	4 X 5 Gal.

### Penta Shipments November Calendar Month Lbs.

To	Supplier				Total	Comparison Nov.	
	Reichhold	Vulcan	Dow	WTC		1978	1977
FPG	96,920	-	163,589	-	260,509	377,235	119,740
Customer	-	-	-	32,650	32,650	96,700	435,342
WTC	99,362	28,000	-	(32,650)	74,712	-	169,242
Totals	176,282	28,000	163,589	-	367,871	473,935	724,324

### Invoicing November Accounting Month \$

	% Profit	1979	1978	1977
FPG Penta	13.7	175,812	189,895	218,940
Customer Penta	14.9	77,069	72,741	169,798
WTC Products	16	218,071	196,316	218,368
K-CCA-C	14	55,955	52,501	-
K-CCA-B	16	36,674	-	-
Totals		563,581	511,150	604,588

TOLS005192

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### II. Materials

Penta - All problems remain as reported last month. In addition, Reichhold has announced Jan. 1 increase of .03/Lb.

Solvents - As also reported, shortages are developing and mineral spirits will have .10/Gal. average increases during December.

### III. Inventory

October closing inventory		465,750
November purchases		268,565
Raw materials	256,610	
Containers	11,955	
Penta 1408	(215,828)	
Penta 1414	(73,316)	
November material converted to product		215,579
November estimated cost products sold		183,500
November estimated closing inventory		550,815
December estimated closing inventory		525,000
January estimated closing inventory		525,000
February estimated closing inventory		550,000

### IV. Sales Forecast

	Dec.	\$ Profit	Jan.	Feb.
FPG Penta	205,000	15	150,000	200,000
Customer Penta	72,000	15.2	50,000	50,000
WTC Products	160,000	19.5	175,000	190,000
K-CCA-B	53,000	16	18,000	36,000
K-CCA-C	26,000	14	25,000	50,000
Totals	516,000		418,000	526,000

### V. St. Louis Comments

No AFE's - No capital expenses

Employee Status	1979	1978
Salaried	5	4
Hourly	5	7

TOLS005193

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### VII. Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	262,500	285,520
Koppers Hickson	143,500	143,945

Inventory	Nov.	Dec.	Jan.	Feb.
	160,013			
		190,000		
			160,000	
				160,000

No medical activity

Production Schedule	Dec.	Jan.	Feb.
Domestic	187,500	225,000	225,000
Koppers Hickson	187,500	150,000	150,000

#### Sales Projection

Domestic	180,000	220,000	200,000
Koppers Hickson	160,000	160,000	120,000

Trucking - See G. Schultz monthly report.

#### Capital Expenses

4210-5056-893 \$176 -Only expenses for November.

4210-5029-899 \$1258.43 - Anticipated expense December this will close this appropriation.

Employee Status	1979	1978
Salaried	2	2
Hourly	1	1
Trucking	2	1

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
Location \_\_\_\_\_  
Subject \_\_\_\_\_

From \_\_\_\_\_  
Location \_\_\_\_\_  
Date \_\_\_\_\_

-6-

### VII. Newark Mix Plant

Oxide Lbs.      Produced  
                  258,416

Shipped  
225,740

Shipments

Honolulu 4 containers  
Koppers Ontario  
Koppers Oroville  
Utah Wood  
Pacific Wood-Bakersfield  
Pacific Wood-Ridgefield

Wickes  
Exterior  
Selma  
Dant & Russell

Inventory

November	\$180,911	Containers \$6,234
December	165,000	
January	175,000	
February	170,000	

Production

	Dec.	Jan.	Feb.
	192,000	160,000	192,000

Sales Honolulu

Honolulu	100,450	28,700	28,700
Koppers	24,000	24,000	24,000
Licensees	144,000	48,000	120,000
CCA Sales	24,000	24,000	24,000
	292,450	124,700	196,700

### VIII. Meetings/Travel

Oct 31-Nov 6 California

Nov. 15 J. D. Hite, D. Davies, R. Arsenault at St. Louis  
J. Bretson - Reichhold at St. Louis

Nov. 27 at Conley, GA

Nov. 28-Dec 1 - Innisbrook, Tarpon Springs, Florida

Dec. 13 - All St. Louis Koppers salaried employees dinner meeting for  
benefits program.

Dec. 26 & 27 & Jan. 2 Vacation Days

R. F. Simmons

TOLS005195

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K-1001  
 Subject November 1979 Operating Expenses

From R. F. Simmons  
 Location St. Louis, MO.  
 Date December 3, 1979

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	13,831	4,291	5,359	
Office Expenses	907	1,355		
Travel Expenses	694	285	1,092	
M & R	1,102	1,986	7,601	
Direct Supply	853	948	5,853	13,674
Fuel & Power	356	746		
Indirect Expense	813	193	276	
Consult & Prof Svcs	175			
Subs. Dues & Donations	283	30		
Depreciation	1,834	5,300	1,841	
Ins. /Taxes	4,324	15549	188	103
Misc. Expense	330	23		504
Misc. Income				
Whse I-70/390/395	2,323			
Pumps	291			
AFE Expense			176	
Total Expense	28,120	16,706	21,294	14,281
Absorbed	24,154	16,970	24,512	25,848
Dec. Expenses	28,000	16,000	16,000	13,000
Absorbed	24,000	15,675	18,000	18,200
Jan. Expenses	24,000	16,000	16,000	11,500
Absorbed	20,000	15,675	17,000	15,000
Feb. Expenses	26,000	16,000	17,000	13,000
Absorbed	22,000	15,675	19,000	18,000

TOLS005196

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick  
 Location K-1001  
 Subject Nov 1979 Operating Expenses

From R. F. Simmons  
 Location St. Louis, MO.  
 Date Dec 3, 1979

	St. Louis	Valpo	Trucking	Newark
Salaries Wages & Benefits	13831	7291	5359	
Office Expense	907	1355		
Travel Expenses	694	285	1692	
M & R	1102	1986	7601	
Direct Supply	853	948	5853	13674
Fuel & Power	356	746		
Indirect Expense	813	193	276	
Consult & Prof Svcs.	175			
Subs. Dues & Donations	283	30		
Depreciation	1834	5300	1841	
Ins./Taxes	4328	1549	188	183
Misc. Expense	330	23		504
Misc. Income				
Whse 170/390/395	2323			
Pumps	291			
AFE Expense			176	
Total Expense	28120	16706	21294	14281
Absorbed	24154	16970	24512	25848
Dec Expenses	28,000	16,000	16,000	13,000
Absorbed	24,000	15,675	18,000	18,200
JAN Expenses	24,000	16,000	16,000	11500
Absorbed	10,000	15,675	17,000	15,000
FEB Expenses	26,000	16,000	17,000	13,000
Absorbed	22,000	15,675	19,000	18,000

10 BATCHES  
EACH

6-D

5-J

6-F

TOLS005197

*R*

cc: Jonette Wharton  
Frank Klasnick  
Eric Yeadon  
Glenn Schultz  
Pam Armbruster  
J. R. Brummett/Ken Cogan

# KOPPERS

## Interoffice Correspondence

To J. D. Hite

From R. F. Simmons

Location K-1001

Location St. Louis, MO.

Subject Monthly Report December 1979

Date January 4, 1980

### St. Louis, Missouri Plant & WTC Operations

#### 1. Shipments December Accounting Month

##### (1) Camden, New Jersey Warehouse

Woodtox Preprime RTU	1 X 55 Gal.
Woodtox RTU	11 X 55 Gal.
Woodtox 140 RTU	10 X 55 Gal.
Penta Stain #509	2 X 55 Gal.

##### (2) Enfield, North Carolina Warehouse

Lumbrella 33 Redwood	6 X 55 Gal.
Lumbrella 33 Redwood	54 X 3 Gal.
Lumbrella 33 Clear	1 X 55 Gal.
Lumbrella 33 Clear	27 X 3 Gal.
Lumbrella 33 Yellow	54 X 3 Gal.
Lumbercoat Conc.	1 X 55 Gal.
Red Orange End Spray 400	4 X 55 Gal.
Green End Spray 400	15 X 5 Gal.
Yellow End Spray 400	10 X 25 Gal.

##### (3) Atlanta, Georgia Warehouse

Lumbrella 33 Clear	16 X 55 Gal.
Lumbrella 33 Redwood	8 X 55 Gal.
Lumbrella 33 Yellow	27 X 3 Gal.
Red Orange End Spray 400	7 X 55 Gal.
Liquid Noxtane SSI	12 X 55 Gal.
Liquid Noxtane I	13 X 55 Gal.
Timbertreat 625	4 X 55 Gal.

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-2-

### (4) Newark, California Warehouse

Liquid Noxtane SSI	6 X 345 Gal.
Liquid Noxtane SSI	45 X 55 Gal.
Liquid Azide 200	1 X 55 Gal.
Clear End Sealer	2 X 55 Gal.

### (5) Portland, Oregon Blender

Rdey Coat Penta RTU	42 X 55 Gal.
Rdey Coat Penta Conc.	14 X 55 Gal.
Woodtox 140 T Conc.	3 X 55 Gal.
Woodtox 140 T RTU	7898 Gal. Bulk
WR 340 Conc.	18 X 408 Lbs.
Petroset II	6 X 460 Lbs.
Timbertox 40 Conc.	1 X 55 Gal.

### (6) St. Louis, Missouri Plant

Woodtox Preprime RTU	10058 Gal. Bulk
Woodtox Preprime RTU	5 X 55 Gal.
Woodtox Preprime Conc.	5 X 55 Gal.
Woodtox 140 Conc.	20 X 55 Gal.
Woodtox 140 RTU	6 X 55 Gal.
Woodtox S Conc.	10 X 55 Gal.
Woodset 310	1 X 55 Gal.
Penta Wood Pres. Conc.	5 X 55 Gal.
Penta Wood Pres. Conc.	1 X 5 Gal.
Coppertreat 00	1 X 55 Gal.
WTC #71	12 X 515 Lbs.
Timbertreat 625	2 X 55 Gal.
Liquid Noxtane SSI	1 X 55 Gal.
Liquid Noxtane I	2 X 55 Gal.
Lumbrella 25 Cherry Tone	50 X 55 Gal.
Lumbrella 33 Redwood Soft	26 X 55 Gal.
Lumbrella 33 Yellow	54 X 3 Gal.
Lumbrella 33 Clear	162 X 3 Gal.

TOLS005199

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_  
 Location \_\_\_\_\_  
 Subject \_\_\_\_\_

From \_\_\_\_\_  
 Location \_\_\_\_\_  
 Date \_\_\_\_\_

- - - 3 -

Clear End Sealer	1 X 55 Gal.
KLB Beam Sealer	12 X 55 Gal.
Penta Stain #509	3 X 55 Gal.
Green End Spray	1 X 5 Gal.
Polelife TF	10 X 45 Lbs.
Polelife Tags	500 Ea.

### Penta Shipments December Calendar Month Lbs.

To	Supplier					Comparison Dec.	
	Reichhold	Vulcan	Dow	WTC	Total		1978
FPG	97640	42000	285480	0	425120	487499	359072
Customer	43085	0	(128233*)	94000	137085	162490	244943
WTC	108975	37100	0	(94000)	51350	100	29200
Totals	248975	79100	285480	0	613555	650089	633215

\*Not included in totals; Replacement on Nov. shipments rejected. See comments on Dow penta in material section.

### December Accounting Month Invoicing \$

	\$ Profit	1979	1978	1977
FPG Penta	15.0	171611	271348	155338
Customer Penta	14.75	96975	44624	140014
WTC Products	18.70	158125	149902	172492
K-CCA-C	14.00	108590	-	-
K-CCA-B	16.000	50707	-	-
Totals		586008	465874	454689

### II. Materials

Penta - Reichhold & Dow penta priced at .56 Lb. January; Vulcan holding at .53 without increasing. Dow remains unable to provide customer acceptable 1000 lb. blocks - shipments made to Walker Williams and Escambia-Brunswick in November had to be replaced with 2000 lb. blocks because fiber pac containers could not be stripped. There is no progress in sight in solving the problem. Reichhold production somewhat low also; no bulk available at Pine Bluff yet, but promised about Feb. 1.

Solvents - Increases again January I averaged about 10¢ gallon. Mineral spirits on the west coast remain in extremely short supply for the third month, causing us to solicit no new business.

TOLS005200

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-4-

### III. Inventory

November closing inventory

Book 592505

Inventory 678038

153414

December purchases

Raw Materials	149094
Containers	4320
Penta 1408	(105464)
Penta 1414	(18636)

December material converted to product

157818

December estimated cost products sold

128500

December estimated closing inventory

702952

January estimated closing inventory

675000

February estimated closing inventory

655000

March estimated closing inventory

640000

### IV. Sales Forecast

	Jan.	% Profit	Feb.	Mar.
FPG Penta	185000	13.5	200000	250000
Customer Penta	115000	15	150000	180000
WTC Products	125000	20	150000	200000
K-CCA-B	18000	17	54000	36000
K-CCA-C	21000	15	42000	105000
Totals	464000		596000	771000

### V. St. Louis Comments

No AFE's No capital expenses

Employee status	1979	1978
Salaried	5	4
Hourly	5	7

No medical activity in December.

TOLS005201

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-5-

### VI Valparaiso Mix Plant

Oxide Lbs.	Produced	Shipped
Domestic	187500	227058
Koppers Hickson	181000	163520
Inventory	Dec. 127868	
	Jan. 165000	
	Feb. 155000	
	Mar. 170000	

Medical - Schultz & Kent had 6 months physicals.

Production schedule	Jan	Feb.	Mar.
Domestic	187500	225000	262500
Koppers Hickson	150000	150000	187500
Sales Projection			
Domestic	200000	220000	260000
Koppers Hickson	140000	120000	180000

Trucking - See G. Schultz December report.

### Capital Expenses

As reported last month \$1258.43 expense this month 4210-5029-899 to close this appropriation.

Next month 4210-5056-893 will be completed with \$17,210 expected expenditures.

Employee status	1979	1978
Salaried	2	2
Hourly	1	1
Trucking	2	1

TOLS005202

# KOPPERS

## Interoffice Correspondence

To \_\_\_\_\_

From \_\_\_\_\_

Location \_\_\_\_\_

Location \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

-6-

### VII. Newark Mix Plant

Oxide Lbs.	Produced	Shipped
	195,326	295,400

#### Shipments

Honolulu 7 containers	Wickes-Elimira
Koppers Ontario	McFarland- Cascade
Selma	Pacific - Ridgefield 2

Kellogg

Pacific Bakersfield

INVENTORY ????

#### Production Schedule

	Jan.	Feb.	Mar.
	160,000	160,000	192,000

#### Sales Projection

Honolulu	28,700	28,700	57,400
Koppers	0	24,000	24,000
Licenses	24,000	120,000	120,000

### VIII. Meetings Travel

Dec. 13 St. Louis Salaried employees benefits program dinner

Dec. 24 afternoon Christmas party-all employees.

Dec. 26, 27 & Jan 2 - vacation days

Jan. 9 Messieurs Hite, Hallahan at St. Louis

Jan 10 or 11 - Valparaiso

Jan. 30 - Feb. 1 - Newark, Portland

R. F. Simmons

RFS/pds

TOLS005203

# KOPPERS

## Interoffice Correspondence

To F. M. Klasnick

From R. F. Simmons

Location K-1001

Location St. Louis, Mo.

Subject December Expenses

Date January 4, 1980

### Salaries Wages & Benefits

	<u>St. Louis</u>	<u>Valpo</u>	<u>Valpo Trucking</u>	<u>Newark</u>
Salaries Wages & Benefits	17,977	4,872	6,532	
Office Expenses	1,863	1,161		
Travel Expenses	355	161	1,073	
M & R	250	578	2,390	
Direct Supply	(847)	530	10,690	12,502
Fuel & Power	328	1,213		
Indirect Expense	351	1,949	90	
Consult & Prof. Svcs	175			
Sub. Dues & Donations				
Depreciation	1,834	5,300	1,841	
Ins/Taxes	4,742	1,523	231	103
Misc Expense	285	(353)		174
Misc Income				
Whse 170/390/395	9,264			
Pumps				
AFE Expense			1,258	
Total Expense	36,367	16,734	24,105	12,579
Absorbed	23,684	14,757	26,489	22,537
Jan. Expense	24,000	14,000	21,000	11,500
Absorbed	16,000	14,100	22,000	16,000
Feb. Expense	22,000	14,500	24,000	11,500
Absorbed	18,000	15,675	25,000	16,000
Mar Expense	24,000	15,000	24,000	13,000
Absorbed	22,000	18,800	26,500	19,200

R. F. Simmons

RFS/pds

TOLS005204

# KOPPERS

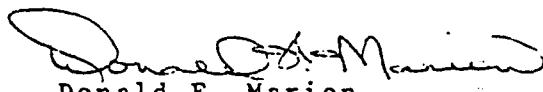
## Interoffice Correspondence

To W. J. Baldwin  
Location K-1350  
Subject Time Oil Visit -  
October 9, 1985

From D. F. Marion  
Location K-750  
Date October 14, 1985

On October 9, 1985, Jim Garrity, Denise Burrell and I visited with Neil Wallis at Time Oil Company's terminal in Portland, Oregon. We discussed the clean-up efforts at the Portland terminal to date and reviewed where we would go in the future. At this time, Time Oil has disposed of nine truckloads of soil and incurred costs of \$55,000 - \$60,000. While visiting Neil Wallis, he made copies of the pentachlorophenol sampling and analysis report prepared by Riedel Environmental Services which is attached for everyone's review and comments. Neil indicated that a meeting with John Denham and John Ruddick of Riedel Environmental Services was to be held on Thursday, October 10, in Portland. After this meeting, Neil Wallis, John Denham and Bob Abbendroth would like to get together to determine the next steps in meeting allowable limits of PCP at the Portland Terminal. In addition, Bob Abbendroth would like to set up a meeting to finalize Koppers portion of the payment for services to clean up the Portland Terminal.

After you have had an opportunity to review the attached report, please give me a call to determine our options at this point in time. If you have any questions regarding the above information or attached report, please call me immediately.

  
Donald F. Marion

DFM/jls

### Attachment

cc: J. F. Garrity  
R. G. Hamilton  
J. D. Hite  
J. Kusar  
R. J. Parry  
T. Smith  
M. R. Urbassik  
A. S. Wells

KOPPERS COMPANY, INC.  
INSURANCE SERVICE  
RECEIVED

OCT 18 1985

 D.W.S  
P.H.  
RETURN FILE  
COPY TO:  
D.G.J.

TOLS005205

# KOPPERS

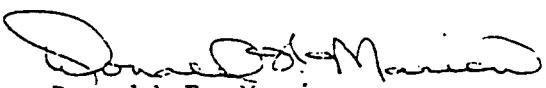
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After you have had an opportunity to review the attached report, please give me a call to determine our options at this point in time. If you have any questions regarding the above information or attached report, please call me immediately.



Donald F. Marion

DFM/jls

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cc: J. F. Garrity  
R. G. Hamilton  
J. D. Hite  
J. Kusar  
R. J. Parry  
T. Smith  
M. R. Urbassik  
A. S. Wells

TOLS005206

M E M O R A N D U M

TO: R. D. Abendroth - Seattle <sup>wk. operations</sup>  
N. P. Lesh (info)- Portland

FROM: Neil Gallagher <sup>of Time</sup> - Portland Products

SUBJECT: Woodtreating Chemicals (Koppers Company)

DATE: January 22, 1981

Neil Wallis - Plant Mgr., Port.  
John DeGalan - Safety Mgr., Port.  
Fred Peabody

Woodtreating has leased since 1967 the Southwest half of what was formerly the TBA Tire Warehouse. Time Oil leases the facility to them and bills them for Handling Charge. The facilities consist of Warehouse space, one 38,000 tank, three 20,000 gallon tanks, one 13,000 tank, one 7,000 gallon tank, one 1,400 gallon heating tank, one 5 HP Motor and 2-1/2 x 3" Gilbarco positive suction pump. In addition, Woodtreating purchased and we installed three 8,000 gallon tanks, one 6,000 gallon and one 3,000 gallon. The tanks are used for raw materials, such as three different solvents, and finished products for shipping. All the tanks are manifolded to a central location and hoses are used for transferring and moving all the products. The heating tank is equipped with four 480V - 115 15W x 12' heating coils. Woodtreating sends in by tank car and by truck, all the raw materials. All products going out go in either bulk truck and trailer or in 55 gallon drums. Formulas are furnished to Time Oil Company by Woodtreating from their main office in St. Louis, Missouri. The finished products are in two different categories. LST Type, that is the lighter product, and Concentrates that are heavier and are usually put in drums.

To mix the raw materials a formulated amount (see attached formula sheet) is charged to the heating tank. The heating coils can be turned on manually or by a timed control switch. Normally the timer is set to come on at 1:00 A.M. or 2:00 A.M. in the morning and the products are hot enough to mix at 7:00 A.M., and if needed the tank is charged again and the heat turned on manually. This way two batches can be made up in one eight hour day. To mix a 30" x 4' a 80 mesh screen is placed in the top opening of the heating tank and the hot material is rotated from the bottom of the heating tank and goes back down in thru the screen.

Wax that comes in 7lb. slabs is broken up and melted down in the screen first. Then Penta that comes in 50 lb. bags is then poured into the screen and also dissolved. If the product is LST Type the heating tank is then pumped to one of the other tanks and more solvents are added and the product is then circulated in the tank from top to bottom for approximately four hours. Concentrates are either pumped into drums or pumped to a storage tank, for later shipment or drumming. It normally takes from one to two hours to add the wax and Penta, depending on consisting of the solvents and heat.

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TOLS005207

Penta is a very hazardous material and must be handled with many safety precautions. Full face masks and respirators must be worn, gloves, boots and rain gear must also be worn. It takes approximately two minutes to fill a 55 gallon drum and two men usually handle this operation. After filling bungs must be tightened, labels and stencils applied, and drums moved from filling area. For 10 drums the elapsed time will be close to one hour for two men. When product goes by truck and trailer, one hour is usually allowed for 7,000 gallons. The wax and Penta come into the warehouse on pallets, therefore a forklift is also an additional piece of equipment along with a floor jack and barrel trucks.

The billing consists of \$615.00 per month for Facility Rental, \$.0124 per gallon for LST Type of product, \$.03715 per gallon for Concentrates and \$.619 per gallon for filling drums, (see attached copy of billing). The average billing for the period of July 1, 1980 to December 31, 1980 has been \$1,514.57, a total of 82,243 net gallons of LST Type, 45,016 gallons of Concentrates and 41,910 gallons drummed for the same period; a charge also of \$.75 per drum of additive that is brought in and shipped is charged. This has been very nil for the last six months. During this same period we have received 83,482 gallons of Solvents, 1,960 bags of Penta, 10,010 lbs of wax, and 720 empty drums. All this material has to be unloaded and stored, but there is no charge for receipts.

Woodtreating is given an inventory at the end of each month (see attached copy). Due to the many different raw materials and finished product, this takes constant supervision on my part.

One pint of each batch of product mixed is mailed to St. Louis. As of January 1, 1981, a new Handling Charge will be applied (see attached copy).

All employees complain of working in this warehouse. Even with masks on, Penta causes your nose and eyes to run. The solvents have a very obnoxious odor and some employees this causes nauseau, and stomach upset.

10000

TOLS005208

M E M O R A N D U M

August 27, 1981

TO: R.D. Abendroth Seattle

FROM: John Denham Time Safety Man Seattle

SUBJECT: WOOD TREATING (KOPPERS COMPANY)

Reference last sentence of my August 17, 1981 memo, copy attached.

My August 21, 1981 inspection of this operation revealed the following deficiencies:

A. TANK FARM OUTSIDE WAREHOUSE

1. Tanks 20001 and 13001 are too close to warehouse. (relocation needed to distance at least five feet from building)
2. Tanks are rusted in many places. (cleaning and painting white needed)
3. No stairways, railings or walkways exist on horizontal tanks 3010, 6008, 8005, 8006 and 8007. (installation needed)
4. No ladder cages exist on tanks 20002, 20003, and 38009. Walkways and railings are damaged, missing or improper. (installation needed)
5. Several heating coils in 1400 gallon heating tank under platform do not work. (replacement needed)
6. Deck atop 1400 gallon heating tank is damaged, unsafe to walk on and permits vapors from this volatile mixture to readily escape into working area. (new metal deck needed)
7. No suction pipelines or manifold exist at rail car siding for unloading purposes. (installation needed)
8. No manifold system exists on incoming product lines for receipt, blending or storage purposes. (manifold needed)
9. Valves on tanks and lines are not maintained at all. (repair and testing or replacement needed)

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TOLS005209

BZTO104(e)042030

10. Valves, lines, pumps, hoses and tanks (in some places) are thickly covered with product. (steam cleaning badly needed)
11. Several valves in system are not chained and locked. (installation needed)
12. Valve at end of isolated line to tank 38009 is leaking product onto ground. (replacement valve needed)
13. Pipeline supports are improper and inadequate. (replacement needed)
14. Pipelines are not painted or identified as to product content. (maintenance needed)
15. Product identification is not on all tanks. (signs needed)
16. Ground area at end of pipelines is saturated with product about four inches deep. (dirt removal and replacement needed)
17. Pump journal cover is not secured to pump. (four sheetmetal screws needed)
18. Cargo hoses are not marked or recorded to show condition, manufacturer, dates inspected or pressure tested. Some are damaged. (repair and recording needed)
19. Weeds are prevalent in quantity within diked compound. Good fire hazard. (weed removal needed)
20. Rail car siding wheel bumpers are not fastened to track. (repair needed)
21. Fire extinguisher on platform by 1400 gallon heating tank is not tagged, has not been inspected for operational capability and is fixed so it can not work, even if needed. (replacement system needed)
22. No spill control system exists at rail car rack or within diked area. One was recommended in 1975, copy attached, but apparently not approved by management. (installation needed)

#### B. INSIDE WAREHOUSE

1. Operation is not isolated. Fumes generated during process can readily enter lube oil warehousing area and overcome any individual not wearing appropriate respiratory equipment. (wall needed in warehouse to isolate operation)

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2. Ventilation inadequate even with doors open. (installation of three - four foot sucker fans needed - one in south wall, one in east wall and one over 1400 gallon heating tank)
3. No spill control system exists in building. Now liquid can run all over area and out of doors at will. (floor sloping and drain installation needed)
4. Four ceiling joists are damaged severely from fork lift operation. (repair and/or replacement beams needed)
5. No clearance signs exist on beams to alert fork lift operators. (signs needed)
6. Lighting is inadequate for the work. Several bulbs are out but even with all lights on, only one candle power was recorded during middle of the day bright daylight. (additional lighting to a minimum of five foot candles needed. An assist to this would be to paint ceiling white)
7. Work area is caked with product and very very dirty. (steam cleaning needed badly)
8. Small floor fan thickly covered with product. Fire hazard. (cleaning needed)
9. No emergency deluge shower exists. Material handled can be injurious. (shower would help. Eyewash should be included on such a permanent hookup)

Nearly all of these deficiencies have been reported previously

JPD/mm

**Attachments**

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TOLS005211

# KOPPERS

## Interoffice Correspondence

To Joe Kusar

From D. W. May

Location K-750

Location K-750

Subject TIME OIL AGREEMENT

Date June 13, 1984

JUN 14 1984

A complete report will be written in the near future providing the details of our decision concerning signing a contract to have Woodtox Preprime T manufactured at Time Oil Company. We have decided that it is in Koppers' best interest to produce this product in St. Louis. I project the sales of the product to be at 60,000 gallons in bulk, and an additional 10,000 to 20,000 gallons in drums for 1984. This small volume does not justify the \$90,000 expense to have the material produced at Time Oil. We have decided to make bulk shipments direct from St. Louis and to find a low cost warehousing location for drum material on the West Coast. We will consider storing the drums at Jones Hamilton as well as manufacturing the product at Jones Hamilton and also look at potential warehouse sites nearer to the customer's plant.

One of the major drawbacks in manufacturing the product at St. Louis is the high freight cost of \$0.65/gallon to move it in a bulk shipment to the customer's plant on the West Coast. The actual cost to produce in St. Louis based on the latest accounting procedures and estimated results of labor negotiations on the contract, etc., is \$1.49/gallon. Including the \$0.65 for freight, this gives a delivered cost to Koppers of \$2.14 to the customer. Don Marion is going to concentrate on finding a way to reduce the freight cost since it represents approximately one third of the total delivered cost. Producing the product at Time Oil would have a cost of \$1.92/gallon plus approximately \$0.08/gallon freight to the customer, or a delivered cost of \$2.00/gallon compared to \$2.14 out of St. Louis with new economics. Due to the low volume sales of Woodtox Preprime T on the West Coast, there is only \$0.12 absorption involved and is not the main factor for making the decision not to use Time Oil. The main factor was the low volume sales and the high cost (\$90,000) to get the product made at Time Oil.

Before the decision becomes final, we wanted to give you and John Hite the opportunity to ask additional questions and/or change our decision. Please give us your final decision as soon as possible since it is essential that we get notice back to Time Oil.

  
D. W. May

DWM/mbm

cc: J. Hite  
D. Marion  
J. Palmer  
J. Garrity

TOLS005212

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SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
SAN PEDRO  
LOS ANGELES



## TIME OIL COMPANY

2737 W. COMMODORE WAY, P.O. BOX 24447, TERMINAL ANNEX, SEATTLE, WA 98124

February 19, 1986

Koppers Company, Inc.  
Attn: Donald F. Marion  
Forest Products Group  
Koppers Building, Room 750  
Pittsburgh, PA 15219

Dear Don:

This refers to our mutual problem of pentachlorophenol contamination at 12005 North Burgard Road in Portland Oregon.

During our January 23, 1986 meeting at your offices in Pittsburgh, you mentioned that Koppers would agree to paying half the clean-up costs incurred/committed to date and that further coordination between Koppers and Time would be appropriate for future commitments. Time concurs with this approach.

In this light, the below accounting to date will be followed by an invoice two weeks from today unless we hear some objections from you before then.

### EXPENDITURES

4/26/85	Chem-Security Systems (Laboratory Analysis of soil sample)	150.00
7/10/85	Northwest Vacuum Truck Service (Relocating 242.76 tons of soil to Arlington)	9,000.00
7/29/85	Chem-Security Systems (Receiving 243.30 tons of soil at Arlington)	27,270.88
8/8/85	Environmental Emergency Services (Obtain and analyze 3 composite samples)	500.00
12/5/85	Environmental Emergency Services (Primary sampling and analysis plus report)	<u>18,741.55</u> <u>\$55,662.43</u>

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TOLS005213

BZTO104(e)042034

COMMITMENTS

DEQ per OAR 240-102-065	3,500.00
* Riedel Environmental Services (Amendment 2)	<u>25,000.00</u> + \$84,162.43
	50% = <u>\$42,081.21</u>

\* Name change from Environmental Emergency Services

Should you have any questions regarding the above, please give me a call.

Sincerely,

  
Robert D. Abendroth  
Operations Manager

RDA/ch

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TOLS005214

BZTO104(e)042035

SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
OAKLAND  
SAN PEDRO  
LOS ANGELES



## TIME OIL COMPANY

1200 N. BURGARD, P. O. BOX 01117, ST. JOHNS STATION, PORTLAND, OREGON 97203

October 26, 1970

Sept 21 1983

Mr. Lowell E. Gutzler  
Wood Treating Chemicals Co.  
5137 Southwest Avenue  
St. Louis, Missouri 63110

Dear Lowell:

Enclosed is an executed copy of the amended schedule  
to our Agreement dated August 1, 1970.

Sorry this was so long in getting back to you.

Regards.

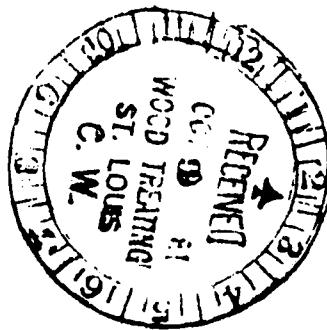
Yours very truly,

*Newton P. Lesh*

Newton P. Lesh

NPL/s  
Encl.

TOLS005215



10000

BZTO104(e)042036

SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



PHONE 285-2400  
CABLE ADDRESS. TIMOIL  
(FAX) 206-283-8036

## TIME OIL COMPANY

2737 WEST COMMODORE WAY  
P.O. BOX 24447, TERMINAL STATION

SEATTLE, WASHINGTON 98199-1233  
SEATTLE, WASHINGTON 98124-0447

November 17, 1988

Mr. Frederick C. Moore  
President  
Koppers Company, Inc.  
436 Seventh Avenue  
Pittsburgh, Pennsylvania 15219

Dear Mr. Moore:

I am writing to you in hopes of resolving a situation that exists between Time Oil Co. and Koppers before it develops into a needless and costly dispute.

Briefly, the situation arises out of an agreement dated March 1, 1967 under which Time Oil agreed to provide certain labor and services to store and blend wood preservatives containing pentachlorophenol belonging to Koppers Company at our Portland, Oregon terminal. After the agreement was terminated in 1982 it was discovered that the ground at the terminal contains substantial quantities of the product belonging to Koppers. As you know pentachlorophenol is a hazardous substance under federal and state law and gives rise to authority by the federal and state governments to compel cleanup of the product by responsible parties including the owner of the product.

Since the problem first materialized Time Oil has been in contact with Koppers Company and initially there appeared to be willingness on the part of Koppers to work with Time to resolve this problem as inexpensively as possible and without exciting the interest of the federal and state authorities. To that end we met with Koppers personnel on January 23, 1986 in Pittsburgh where an agreement in principle was reached under which the cost of resolving this problem would be shared on a fifty fifty basis.

It is not my purpose here to detail the efforts that Time Oil has undertaken to resolve this environmental problem nor the efforts it has taken to obtain the continued cooperation of Koppers. Suffice it to say here that within the last year and half Koppers Company appears to be simply ignoring the problem and our communications.

0297C

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TOLS005216

BZTO104(e)042037

SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



PHONE 285-2400  
CABLE ADDRESS TIMOIL  
(FAX) 206-283-8036

## TIME OIL COMPANY

2737 WEST COMMODORE WAY  
P.O. BOX 24447, TERMINAL STATION

SEATTLE, WASHINGTON 98199-1233  
SEATTLE, WASHINGTON 98124-0447

September 19, 1988

Mr. Bill Giarla  
Koppers Company, Inc.  
Koppers Building, Room 750  
Pittsburg, Pennsylvania 15219

Dear Mr. Giarla:

On July 27, 1988 you and I discussed the matter of the costs incurred in the cleanup of Koppers' pentachlorophenol at Time Oil's Northwest Terminal in Portland. Since that time, Time Oil has been searching for an economic and effective method of disposing of the problem. In that regard, enclosed is a preliminary work plan prepared by Ecova Corporation for the cleanup of the pentachlorophenol contaminated soils. Although Time Oil is still in the process of evaluating the merits of the work plan, we anticipate following it subject to approval by the Oregon Department of Environmental Quality.

The cost of the proposed cleanup and related work is estimated at \$400,000. Pursuant to the January 23, 1986 agreement between Koppers and Time Oil, Kopper's share would be \$200,000.

As a reminder, Time Oil has spent \$118,371.10 to date on investigation and cleanup of our mutual problem. Of this we have invoiced you \$54,780.28 by invoices dated 3/6/86 and 4/17/87 (copies enclosed). We have not yet received payment for those invoices. Also enclosed is our invoice dated 9/21/88 for \$4,405.27, which brings Kopper's total share of moneys spent to date to \$59,185.55.

Very truly yours,

TIME OIL CO.

Terrill L. Henderson  
Corporate Counsel

TLH:pjv

Enclosures

0297C

10000

TOLS005217

BZTO104(e)042038

SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



# TIME OIL COMPANY

PHONE 285-2400  
CABLE ADDRESS: TIMOIL  
(FAX) 206-283-8036

2737 WEST COMMODORE WAY  
P.O. BOX 24447, TERMINAL STATION

SEATTLE, WASHINGTON 98199-1233  
SEATTLE, WASHINGTON 98124-0447

November 17, 1988

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President  
Koppers Company, Inc.  
436 Seventh Avenue  
Pittsburgh, Pennsylvania 15219

Dear Mr. Moore:

I am writing to you in hopes of resolving a situation that exists between Time Oil Co. and Koppers before it develops into a needless and costly dispute.

Briefly, the situation arises out of an agreement dated March 1, 1967 under which Time Oil agreed to provide certain labor and services to store and blend wood preservatives containing pentachlorophenol belonging to Koppers Company at our Portland, Oregon terminal. After the agreement was terminated in 1982 it was discovered that the ground at the terminal contains substantial quantities of the product belonging to Koppers. As you know pentachlorophenol is a hazardous substance under federal and state law and gives rise to authority by the federal and state governments to compel cleanup of the product by responsible parties including the owner of the product.

Since the problem first materialized Time Oil has been in contact with Koppers Company and initially there appeared to be willingness on the part of Koppers to work with Time to resolve this problem as inexpensively as possible and without exciting the interest of the federal and state authorities. To that end we met with Koppers personnel on January 23, 1986 in Pittsburgh where an agreement in principle was reached under which the cost of resolving this problem would be shared on a fifty fifty basis.

It is not my purpose here to detail the efforts that Time Oil has undertaken to resolve this environmental problem nor the efforts it has taken to obtain the continued cooperation of Koppers. Suffice it to say here that within the last year and half Koppers Company appears to be simply ignoring the problem and our communications.

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Mr. Frederick C. Moore  
November 17, 1988  
Page 2

I would appreciate anything you might be able to do to advise us as to how this matter may be resolved. My telephone number is (206) 285-2400.

Very truly yours,

TIME OIL CO.

*Robert D. Abendroth*  
Robert D. Abendroth  
Vice President

RDA:TLH:pjv

cc Mr. Bill Giarla  
Koppers Company, Inc.  
Koppers Building, Room 750  
Pittsburgh, Pennsylvania 15219

10000

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SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



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## TIME OIL COMPANY

2737 WEST COMMODORE WAY  
P.O. BOX 24447, TERMINAL STATION

SEATTLE, WASHINGTON 98199-1233  
SEATTLE, WASHINGTON 98124-0447

September 19, 1988

Mr. Bill Giarla  
Koppers Company, Inc.  
Koppers Building, Room 750  
Pittsburg, Pennsylvania 15219

Dear Mr. Giarla:

On July 27, 1988 you and I discussed the matter of the costs incurred in the cleanup of Koppers' pentachlorophenol at Time Oil's Northwest Terminal in Portland. Since that time, Time Oil has been searching for an economic and effective method of disposing of the problem. In that regard, enclosed is a preliminary work plan prepared by Ecova Corporation for the cleanup of the pentachlorophenol contaminated soils. Although Time Oil is still in the process of evaluating the merits of the work plan, we anticipate following it subject to approval by the Oregon Department of Environmental Quality.

The cost of the proposed cleanup and related work is estimated at \$400,000. Pursuant to the January 23, 1986 agreement between Koppers and Time Oil, Kopper's share would be \$200,000.

As a reminder, Time Oil has spent \$118,371.10 to date on investigation and cleanup of our mutual problem. Of this we have invoiced you \$54,780.28 by invoices dated 3/6/86 and 4/17/87 (copies enclosed). We have not yet received payment for those invoices. Also enclosed is our invoice dated 9/21/88 for \$4,405.27, which brings Kopper's total share of moneys spent to date to \$59,185.55.

Very truly yours,

TIME OIL CO.

Terrill L. Henderson  
Corporate Counsel

TLH:pjv

Enclosures

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TOLS005220

BZTO104(e)042041

# Beazer

86-102(E) E.3

BEAZER EAST, INC., 436 SEVENTH AVENUE, PITTSBURGH, PA 15219

November 22, 1996

VIA AIRBORNE EXPRESS

Mr. Kevin Murphy  
Time Oil Company  
2737 W. Commodore Way  
Seattle, WA 98199

Dear Kevin:

As discussed, enclosed are some technical resource documents to help you evaluate remediation strategies for soils and groundwater impacted by pentachlorophenol at Time Oil's Portland facility.

I have included a bio-venting treatability study (primarily groundwater), numerous published papers on soil bioremediation, two site-specific studies done to correlate penta and dioxin, and vendor literature regarding recycling soils into asphaltic material.

I trust this will give you some useful insights. If there are additional materials I can assist in providing you, please feel free to call at (412) 227-2194.

Very truly yours,

*Michael D. Tischuk*

Michael D. Tischuk  
Technical Resources Manager

MDT/dlk

Enclosures

11000

TOLS005221

86-102(E)E.3  
SEP 26 1996

WILDMAN, HARROLD, ALLEN & DIXON  
225 WEST WACKER DRIVE  
CHICAGO, ILLINOIS 60606-1229  
(312) 201-2000  
FAX: (312) 201-2555

ANTHONY G. HOPP  
(312) 201-2537

September 24, 1996

Ms. Patricia M. Dost  
Schwabe, Williamson & Wyatt  
Pacwest Center, Suite 1600-1800  
1211 Southwest 5th Avenue  
Portland, OR 97204-3795

**Re: Time Oil Company, Northwest Terminal**

Dear Patty:

I am writing to confirm our most recent telephone conversation. Mike Tischuk and I plan to meet with you in your office on October 17, 1996. You have indicated that you would like to begin the meeting at approximately 10:30 a.m. You have also indicated that the day will include a tour of the Time Oil facility.

At present, Jane Patarcity is unavailable on October 17. She has indicated, however, that she will join us if her schedule changes. I look forward to meeting with you.

Very truly yours,

WILDMAN, HARROLD, ALLEN & DIXON

*Anthony Hopp*

Anthony G. Hopp

AGH:kma  
cc: Jill M. Blundon  
Michael Tischuk  
Jane Patarcity  
Robert L. Shuftan

11000

TOLS005222

BZTO104(e)042043

**TIME OIL CO.**

2737 West Commodore Way  
Seattle, WA 98199-1233

*TIME*  
~~TIME~~  
86-102(E)F.3  
Phone: (206) 285-2400

**ENVIRONMENTAL SERVICES**

TELEPHONE: (206) 286-6443

FAX #: (206) 285-7833

CONFIRMATION: (206) 286-6443

**FACSIMILE TRANSMITTAL**

FROM: Kevin Murphy

TO: Jane Patarcity

DATE: August 7, 1996

COMPANY: Beazer East, Inc.

NO. OF PAGES INCLUDING COVER 3

ADDRESS: 436 Seventh Avenue

CITY/ST: Pittsburgh, PA 15219

RECEIVING FAX # (412) 227-2950

Ms. Patarcity:

Per our telephone conversation yesterday, I've put my questions to paper. We anticipate beginning some of this field work in early September, so if any information is available, please pass it along ASAP.

One of the first steps in our RI will be to determine the chemical nature of the contaminants in the soils and groundwater. We have copies of several of the MSDS sheets for the Koppers products formulated at the site (list attached for your reference). These sheets provide little insight into the actual chemical nature of the various components of the Koppers formulations. We hope that you can provide chemical or analytical descriptions of the formulations and chemicals listed below and on the attached sheets, also provide the purpose of the chemicals in the mixtures which may give us an indication of how they may react or behave in the environment. Our desire is to be thorough in our investigation, but limit the cost of the full spectrum of chemical analyses that may be necessary to identify or eliminate specific chemical categories. I would appreciate any analytical information or reports generated for other wood treating or product formulation sites that Koppers/Woodtreating/Beazer has investigated. This information will help us to focus our investigation and reduce overall costs. The chemicals which we have identified in mixture records are as follows:

- |                                 |                          |
|---------------------------------|--------------------------|
| 1. KB-3 Solvent (Eastman Kodak) | mixed aliphatic ketones  |
| 2. B-11 Solvent (Eastman Kodak) |                          |
| 3. WK-60 Solvent                | Aliphatic Ketones        |
| 4. OXO Bottoms                  | Heavy alcohol boilers    |
| 5. Nalco 6RJ-947 and 6SJ-743    | Polyester                |
| 6. HiTec E315                   |                          |
| 7. 325 Solvent (Chevron)        | naphthenes and paraffins |
| 8. Espesol 310-66               |                          |

I'm intrigued about your comments regarding the inability to treat the PCP impacted media or tendency to contain without treatment at the Feather River site in Oroville. I would like to review your treatability test reports and share them with our bioremediation specialists. This information could certainly have a significant impact on the direction of our first phase of work which is the chemical evaluation of the stockpiled soils, preparations for treatability studies and evaluation of treatment and disposal methods for the soil and other media. I would appreciate the chance to speak directly with Mike Tischuk. Would you please provide his phone number. Thanks for your assistance and I look forward to meeting with you some time in September (after the 11th appears to be clear on my calendar).

Sincerely,

Kevin Murphy

TOLS005223

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# Wood Treating Chemicals



complete line of high quality wood preservative chemicals for:

**Lumber Industry**

**Industrial Products**

**Utility Industry**

**Commercial Wood Preserving Industry**

# KOI PERS

## Lumber Industry Chemicals

### End Coatings

**End Sealer.** A fast-drying heavy wax emulsion, provides maximum protection for green lumber against end splitting and checking while drying during seasoning. Available in clear and a number of colors. Do not freeze.

**End Spray 400 Green and Red.** Pigmented color concentrate for application to lumber ends and plywood edges to give uniform color coating to enhance the product appearance. Water reducible—do not freeze. Can be applied to wood by brush or spray. Normally applied at ratio of 1 gallon 400 End Spray to 7-12 gallons of water, depending on the desired color intensity.

**Wood Seal Wax.** A light-lemon color, highly refined wax end sealer free of oil and tackiness. Provides maximum protection for green lumber against end splitting and checking during seasoning. Do not freeze.

### Sap Stain Control

**Liquid Azide 200.** A 200-1 concentrate chemical specially designed to prevent "enzymatic brown stain" on sugar pine. Can be used alone or with other sap stain control chemicals adaptable for mixing with proportioning equipment.

**Liquid Noxtane® SS-1.** A specially formulated sapstain chemical concentrate for the prevention of blue stain end mold in lumber operations of southern and western wood species. Can be mixed with automatic proportioning equipment. Dilute before use either 100 to 1, 6 to 1 or 50 to 1 depending on stain hazard.

**Super Noxtane®.** A dry powder. General purpose chemical to control sap stain and mold in freshly cut lumber. Buffered for dip tank use or used at double strength in spray systems.

**Liquid Noxtane® 1.** Liquid sapstain control chemical concentrate dilutable at a rate of 80 to 1 or 50 to 1, depending on stain hazard. Liquid Noxtane 1 contains sodium penta-

chlorophenate and sodium metaborate mixed in a water-organic hydrocarbon solvent system.

### Dimension Lumber Protection

**Lumbrella® Coating.** A specially formulated weather protective coating. Provides water repellency and dimensional stability. Replaces paper wrap in protecting quality lumber from sawmill to building site or lumber yard. Available in clear, yellow, brown and redwood colors. Dilutable in water in accordance with the recommended mixtures.

**Timbertreat™ Chemicals—Concentrate.** Protects freshly cut logs and lumber against insect attack. Dilutes at a rate of one gallon to 160 gallons of water, specific protection against Ambrosia and Lyctus beetles. Active ingredient—Gamma Isomer of BHC.

### Dowicide G-ST Beads—

**Sodium Pentachlorophenate.** A water soluble fungicide for control of sap stain on lumber when used with buffering agents.

## Industrial Products

**Penta Stain® Coating.** A top quality, quickly penetrating outdoor wood stain, containing 5% pentachlorophenol by weight. Also, contains quality resins to give good water repellency. Available in nine basic colors which can be intermixed by the buyer for wider color selection.

**Penta Wood Preservative—Concentrate (East of the Rockies).** A concentrated solution of pentachlorophenol to be diluted with fuel oil, kerosene, range oil, or diesel fuel. Contains 41% technical pentachlorophenol. Use on wood in contact with ground or other severe exposure applications.

**Timbertox 40 Preservative—Concentrate (West of the Rockies).** A concentrated solution of pentachlorophenol to be diluted with fuel oil, kerosene, range oil, or diesel fuel. Contains 40.5% technical pentachlorophenol. Use on wood in contact with ground or other severe exposure applications.

**Penta Wood Preservative—Ready-to-Use.** A clear, ready-to-use liquid containing 5% pentachlorophenol by weight. Solvents used are residual in the wood and do not provide a paintable surface. Use on wood in contact with ground or other severe exposure applications.

**Woodtox® Preservative—Ready-to-Use.** A clear water repellent preservative. Use on wood where cleanliness and paintability are desired. Contains 5% pentachlorophenol by weight.

**Woodtox® Preprime Preservative.** A high quality water repellent preservative for treatment of millwork prior to factory paint priming. Available as a 1:4 concentrate or a ready-to-use solution. Meets National Woodwork Manufacturers Association Standards for water repellency and preservative effectiveness.

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**Woodtax® 140 Preservative.** An economical water repellent preservative for dip treatment of millwork, boxes and pallets. Available in a 1:4 concentrate or ready-to-use solution. Meets Federal Specification TT-W-572B and National Woodwork Manufacturers Association Standards for water repellency and preservative effectiveness.

**Woodtax® 152 Preservative—Ready-to-Use.** Water repellent wood preservative with dark brown color added. For treatment of wood parts used in truck or wagon body construction, other miscellaneous fabricated lumber items.

**Copperreat® 00 Preservative.** Copper naphthenate specially formulated to meet MIL-W-18142B, Amendment 3. Assay 2% copper metal by weight in ready-to-use solution. Use on wood in contact with ground or other severe decay hazard areas.

## Utility Industry Chemicals

**Pole-Lite®** Ready-to-use, grease-like penetrating coating for ground line remedial treatment of standing poles, poles to be relocated, or poles stored for prolonged periods. Can also be used to treat piling cut-offs. Conforms to Bell Laboratories Specification for C Wood Preservative. There are two formulations: one contains 15% Sodium Fluoride and the other containing 15% Sodium Borate, in addition to 10% penta and 15% creosote.

**Pole-Treat® 15.** A preservative grease for use in ground line remedial treatment of standing poles, relocated poles held too long in storage, piling cut-offs, and other

wood maintenance uses. Contains 15% pentachlorophenol and 15% creosote.

**Tritox.** Tritox Preservative Paste is a ready-to-use, grease-like preservative for remedial treatment of standing poles, relocated poles, poles stored too long, and piling cut-offs. It has a combination of oil soluble and water soluble preservative materials. The mixture of preservatives (10% penta, 35% creosote, 40% sodium fluoride) provides the combined preservative effect considered more effective by some authorities than a single preservative. The water soluble salts are considered necessary by many

people for fast penetration results in poles with high moisture content.

**Woodtreat® AA Preservative.** A paste-like, tan colored emulsion preservative for remedial treatment of dry wood in buildings and structures. This product is useful for the treatment of gains and holes made in poles after treatment that expose untreated wood such as pile cut-offs; for treatment of bridge timbers and other uses where a "loading" of preservative is desired. This product contains 10% pentachlorophenol.

**Groundline Treating Accessories.** Kraft Paper and dating tags and nails, are available as accessories to groundline products.

## Commercial Wood Preserving Industry

**Prilled and Block Monsanto Pentachlorophenol.** Highly toxic to fungi, termites, many forms of bacteria. Use for pressure and thermal treatment of utility transmission poles, fence posts, guard rails, timber and other industrial wood products. Meets American Wood Preservers' Specification and Fed. Spec. TT-W-570.

**Flocculating Agents.** WTC-71 and WTC-74 are products designed for the treatment of oil in water emulsions to allow the removal of oil, wood extractives and suspended solids from effluents found in recovery and waste disposal systems, wood treating plant operations.

**WTC 7-11 Emulsion Prevention Aid.** This product is designed to prevent the formation of oil-water emulsions in penta solutions used in pressure treating. It is added in small quantities to the treating solution.

**WR-340.** Straw-colored liquid containing a blend of resins and solvents. Combined with pentachlorophenol and mineral spirits, it produces a paintable preservative water-repellent solution. **Timbertox D-5.** 5% penta in petroleum solvent which meets AWPA Standard P-9 hydrocarbon solvent Type A. Dark amber color solution.

**LST Cosolvent II.** Anti-blooming additive and co-solvent for light solvent pentachlorophenol solutions. Meets AWPA Standard P-9 for hydrocarbon solvent Type C cosolvent system.

**Petrosol II.** This product is a blend of solubilizers, inhibitors and anti-oxidants designed to prevent the oxidation, sludging, polymerization, and darkening of pentachlorophenol solutions employed in thermal or pressure treating or Boulton drying of wood poles, piling, and lumber. This product is oil soluble and water insoluble.

**Specialty Wood Chemicals Group**  
Forest Products Division  
Koppers Company, Inc.  
5137 Southwest Avenue  
St. Louis, Missouri 63110  
314-772-2200

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**SCHWABE  
WILLIAMSON  
& WYATT**  
P.C.  
ATTORNEYS AT LAW

PACWEST CENTER, SUITES 1600-1800  
1211 SOUTHWEST FIFTH AVENUE • PORTLAND, OREGON 97204-3795  
TELEPHONE: 503 222-9981 • FAX: 503 796-2900 • TELEX: 650-686-1360

**PATRICIA M. DOST**

**September 6, 1996**

**Mr. Anthony G. Hopp  
Wildman, Harrold, Allen & Dixon  
225 West Wacker Drive  
Chicago, Illinois 60606-1229**

**Re: Time Oil Work Plan**

**Dear Tony:**

Enclosed please find three letters constituting the Oregon Department of Environmental Quality's approval of the work plans I forwarded to you earlier. DEQ's August 19, 1996 letter approves Time Oil's Stockpile Management Plan. The August 22, 1996 letter approves Time Oil's Revised Drum Removal and Small Stockpile Relocation Plan. Finally, the August 23, 1996 letter approves our RI/FS Work Plan.

Time Oil plans to start work on the drum removal and stockpile relocation plan and the stockpile management plan the week of September 16. Please give me a call if you have any questions, or have Jane or Mike call Kevin directly.

We are looking forward to visiting with you the week of October 7. Please give me a call as soon as you can confirm a specific date.

**Very truly yours,**



Patricia M. Dost

PMD:rc

**Enclosures**

**cc: Rick Gordon  
Kevin Murphy**

**TOLS005226**

**11000**

**PORTLAND   SEATTLE   VANCOUVER   WASHINGTON**  
OREGON • WASHINGTON • WASHINGTON • DISTRICT OF COLUMBIA  
503 222-9981   206 622-1711   360 694-7351   202 634-8901

(17/89360/102406/PMD/125914.1)

**BZTO104(e)042047**

# Oregon

August 22, 1996

Kevin Murphy  
Time Oil Company  
2737 W. Commodore Way  
Seattle, WA 98199-1233

DEPARTMENT OF  
ENVIRONMENTAL  
QUALITY  
NORTHWEST REGION

Re: Revised Drum Removal and  
Small Stockpile Relocation Plan  
Time Oil Company Northwest Terminal

Dear Mr. Murphy:

The Department of Environmental Quality (DEQ) Voluntary Cleanup Program (VCP) has reviewed the revised plan for drum removal and soil stockpile relocation activities at the Time Oil Co. Northwest Terminal Facility. The revised plan and a response to DEQ's previous 6/26/96 comments were submitted to DEQ on August 2, 1996.

Time Oil and DEQ are finalizing the terms of a Voluntary Cleanup Agreement. It is anticipated that this agreement will be in place prior to initiation of the proposed work, and will allow the addition of material to a larger stockpile for interim storage while Time Oil conducts a site Remedial Investigation and Feasibility Study and develops a disposal plan for the soil stockpile.

DEQ will issue a press release when the Agreement is signed, and will allow Time Oil to comment on a draft of that press release.

Time Oil has responded adequately to previous DEQ comments on the proposed work. The drum removal plan is approved with the following understandings:

1. Data results from preliminary sampling of the drums have not included analyses for pesticides. Based on the information provided about Kopper's formulation activities, it is unlikely that pesticides other than pentachlorophenol will be present in the drum wastes. However, the potential for pesticides such as DDT in soil in the eastern portion of the facility which are unrelated to the Kopper's operation may require further investigation during the Remedial Investigation depending on the information provided about historical activities and uses.
2. Time Oil Co. will provide DEQ with a copy of the contractor's decontamination pad design for review and comment.

John A. Kitzhaber  
Governor



2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471  
DEQ-1

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BZTO104(e)042048

To: Kevin Murphy  
August 22, 1996  
Page 2

3. Time Oil Co. will provide DEQ with the specifications and a design schematic for the wastewater treatment system for review and comment. DEQ's approval of the drum disposal plan is contingent on Time Oil Co. obtaining permits to discharge wastewater treated for pentachlorophenol, metals, semivolatile, and other contaminants of concern to the City of Portland publicly owned treatment works (POTW). Time Oil Co. will provide DEQ with copies of any permits or agreements under which the treated wastewater will be disposed.
4. Time Oil Co. will provide DEQ with an operational plan for characterizing the waste streams generated during the work activities. DEQ has indicated to Time Oil that the prill material in the small stockpile should retain the F027 waste classification. Time Oil has indicated that the waste material with high metal contents will be segregated based on visual indicators, since the material had a paint-like appearance.
5. Because high levels of metals may impact the future biotreatment of soil, care should be taken to segregate the materials added to the existing large stockpile. Time Oil Co. has indicated that it will do so.
6. Time Oil Co. will decide how to handle wood debris after physical separation from the small soil pile is completed and the volume of material has been determined. Rocks and gravel separated from the small soil pile will be stored in the large soil stockpile management area. If cleaning of wood debris is necessary, Time Oil Co. will develop a plan indicating the testing frequency, sampling and analytical methods, and standards that will be used to determine if debris can be managed as solid waste. This plan will be submitted for DEQ review and approval.
7. Time Oil Co. will provide clarification of the confirmation sampling strategy. Confirmation sampling will include analyses for volatile organic compounds, including chlorinated solvents, in the small soil stockpile area.
8. Time Oil will determine the impacts to groundwater in the drum disposal area during the Remedial Investigation. Monitoring wells will be installed. Time Oil will propose the number and locations for these wells to DEQ for review and approval.
9. DEQ is concerned about construction activities and changes in site use on the eastern portion of the facility that may occur prior to completion of site characterization activities. In particular, the construction of a stormwater drainage system with catch basins in the drum removal area, as outlined in Time Oil Co.'s NPDES permit application, could potentially generate hazardous waste or transport hazardous waste (i.e., soil, sediment, or surface water) into the Willamette River. Time Oil Co. has indicated that the site development activities will be integrated into the Remedial Investigation, and that there are no current plans for immediate construction activities in the eastern portion of the facility.

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To: Kevin Murphy  
August 22, 1996  
Page 3

We understand that the drum removal and stockpile relocation are being scheduled for September and would like to be apprised of the daily schedule of activities so that we can observe the work. If you have any questions, please call me at (503) 229-6729.

Sincerely,



Karla Urbanowicz  
Project Manager  
Northwest Region  
Voluntary Cleanup Site Assessment Section

Cc: Patricia M. Dost - Schwabe Williamson & Wyatt  
Leslee Conner - Landau Associates, Inc.  
Tom Roick - DEQ NWR VCSAS  
Jennifer Sutter - DEQ NWR VCSAS  
Barbara Puchy - DEQ NWR Haz Waste  
Mike McCann - DEQ WR Eugene

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TOLS005229

BZTO104(e)042050

# Oregon

August 23, 1996

DEPARTMENT OF  
ENVIRONMENTAL  
QUALITY

NORTHWEST REGION

Kevin Murphy  
Time Oil Company  
2737 W. Commodore Way  
Seattle, WA 98199-1233

Re: RI/FS Work Plan  
Time Oil Company Northwest Terminal

Dear Mr. Murphy:

The Department of Environmental Quality (DEQ) Voluntary Cleanup Program (VCP) has reviewed the response to comments, dated August 2, 1996, on the RI/FS Work Plan prepared for the Time Oil Co. Northwest Terminal Facility. DEQ previously commented on the Work Plan in a letter dated June 12, 1996.

DEQ's comments have been addressed. The Work Plan for the Remedial Investigation/Feasibility Study, with changes as noted in the response to DEQ comments, is approved.

It is DEQ's understanding that the RI work will address characterization of soil and groundwater in the eastern area of the facility, although specific locations for soil sampling and monitoring wells have not been proposed in the plans submitted to this date. DEQ is expecting an addendum which will propose locations for well installation and that will be implemented during the Phase II RI work. A similar addendum for soil sampling may also be necessary after conclusion of drum and stockpile removal activities in that area of the site.

Additional submittals which are expected include information about the on-site wastewater treatment system used to treat water pumped from Well M, and plans for management of investigation derived waste.

One clarification is necessary regarding the wells which will be sampled for groundwater quality in quarterly sampling. All wells should be included. If free product is noted in any well, such as well N, P, or Q, that well may be excluded from that round of sampling after consultation with DEQ. It is essential to begin collecting water quality information from the tank farm area, particularly since the presence of free product or high levels of dissolved constituents in proximity to the river may require interim action. In addition, it would be advisable to include well LW5S in the initial screening of groundwater for PCBs.

John A. Kitzhaber  
Governor



2020 SW Fourth Avenue  
Suite 400  
Portland, OR 97201-4987  
(503) 229-5263 Voice  
TTY (503) 229-5471

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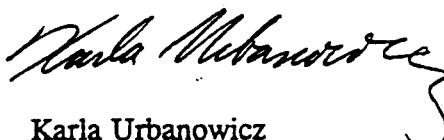
August 23, 1996  
Page 2

Time Oil has indicated that it wishes to retain the use of the term "phase" in the Work Plan. Phase I (soil stockpile) has been given a high priority in the work plan schedule to enable Time Oil to address RCRA compliance issues within a five year time frame. However, the highest environmental priority is to address conditions at the site that may represent a risk to public health and the environment. Information from the soil and groundwater investigation is critical to evaluating that risk, and obtaining that information is a high priority for DEQ.

As a point of information, DEQ is aware of at least one drinking water supply well in the vicinity of the Time Oil site. That well is present at the Bonneville Power Administration St. Johns Substation directly east of the Time Oil facility. DEQ can provide available well log information if necessary.

If you have any questions, please call me at (503) 229-6729. We are looking forward to the initiation of the field investigation scheduled for September. It would be useful if your consultant could provide a daily verbal update of site activities and progress, so that we can arrange field visits and provide any necessary oversight.

Sincerely,



Karla Urbanowicz  
Project Manager  
Northwest Region  
Voluntary Cleanup Site Assessment Section

Cc: Patricia M. Dost - Schwabe Williamson & Wyatt  
Leslee Conner - Landau Associates, Inc.  
Tom Roick - DEQ NWR VCSAS  
Jennifer Sutter - DEQ NWR VCSAS  
Barbara Puchy - DEQ NWR Haz Waste

110600

TOLS005231

86-102(E) E.3



PACWEST CENTER, SUITES 1600-1800  
1211 SOUTHWEST FIFTH AVENUE • PORTLAND, OREGON 97204-3795  
TELEPHONE: 503 222-9981 • FAX: 503 796-2900 • TELEX: 650-686-1360

PATRICIA M. DOST

August 7, 1996

Mr. Anthony G. Hopp  
Wildman, Harrold, Allen & Dixon  
225 West Wacker Drive  
Chicago, Illinois 60606-1229

**Re: Time Oil Company Northwest Terminal**

Dear Tony:

Enclosed please find Koppers' copies of documents Time Oil has recently submitted to DEQ for approval:

1. RI/FS Work Plan documents;
2. Stockpile Management Plan;
3. Request for Proposal Environmental Construction Services;
4. Drum Removal and Small Stockpile Relocation Plan;
5. Revised Health and Safety Plan.

Please pass these on to Jane Patarcity.

I understand from Kevin Murphy that Jane Patarcity would like to meet at the Time Oil site in September. Jane has suggested to Kevin that Mike Tischuk, the remediation manager at Koppers' Oroville facility, has some good experience dealing with these kinds of problems, and it might be helpful if Mike could attend the site meeting also. Finally, you might consider attending; it would be a good chance for you and I to try to work out our differences on the interim cost allocation issue.

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PORLAND SEATTLE VANCOUVER WASHINGTON  
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503 222-9981 206 622-1711 360 694-7551 202 634-8901

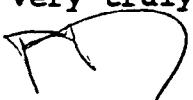
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Mr. Tony Hopp  
August 7, 1996  
Page 2

Please give me a call if you have any questions, or  
feel free to have Jane call Kevin directly. I look forward to  
talking with you soon.

Very truly yours,

  
Patricia M. Dost

PMD:rc

Enclosures

cc: Rick Gordon (w/o encs.)  
Kevin Murphy (w/o encs.)

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SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



# TIME OIL CO.

2737 WEST COMMODORE WAY  
P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

86-102(E) E.3

August 2, 1996

Ms. Karla Urbanowicz  
Oregon Dept. of Environmental Quality  
2020 SW Fourth Ave, Suite 400  
Portland, Oregon 97201-4987

RE: RI/FS WORK PLAN  
TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON

Dear Ms. Urbanowicz:

We received your letter of June 12, 1996 that contained DEQ's comments on our May 10, 1996 Work Plan for the Remedial Investigation/Feasibility Study (RI/FS) for the Time Oil Co. Northwest Terminal. As requested in that letter, the following provides responses to your comments. Attachments to this letter include several figures and tables from the work plan, revised to address your comments. Upon receipt of final approval of this letter, we will bind these revised tables and figures into our copies of the work plan and send final copies of the revised tables and figures to DEQ for binding into your copies.

## GENERAL COMMENTS

### A. RI/FS Phases

Time Oil acknowledges that additional phases may be needed to complete the RI, depending upon the results of the work proposed in the Work Plan. Time Oil also acknowledges that the RI/FS may expand into other areas not currently planned for investigation, should additional information that justifies expansion of the RI/FS become available.

### B. Drum Disposal Area

Time Oil recognizes that the area in the eastern portion of the facility, where a recent evaluation identified that drums and a small stockpile of soil contain elevated levels of PCP and TPH, requires further action. We propose, as suggested by DEQ, to coordinate the drum and soil removal and confirmation testing (described in our letter to you of May 28, 1996) with the RI. We will supplement the proposed field work with evaluations of available historical facility records and aerial photographs, as suggested by DEQ, and a topographic survey. We propose to report the results of this work in a technical memorandum to DEQ upon receipt and validation of the confirmation sampling results. This will allow all parties to evaluate whether additional investigation of the area is necessary, and if so, how best to phase further investigations.

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## SPECIFIC COMMENTS

1. The enclosed revised Figures 2-2 and C-1 from the work plan (Attachment 1) identify the location of the former Crosby and Overton truck-washing area. The Zone 5 samples collected in 1989 were from this area, as demonstrated by the documents provided in Attachment 2. Our knowledge of the history of the former Crosby and Overton truck washing area shows that the area is unlikely to be an area of concern, and therefore that additional evaluation of the area, if any, is not a high priority and need not be initiated prior to Phase III. The following summarizes our knowledge of this area:
  - During the time of use, which ended in 1986, the truck washing trough was lined with metal and filled with gravel. In 1986, Crosby and Overton removed the gravel and the metal liner, and refilled the trough area with soil. In 1989, at Time Oil's request, Crosby and Overton collected a composite soil sample (believed to be a composite of four individual samples from the area); the analytical results are those referenced by DEQ. The 1989 composite sample showed detectable levels of TPH (6,170 ppm), PCBs (0.2 ppm), and PAH (from nondetect to 5.2 ppm). Of these, clearly TPH was elevated, but PCBs were not (even if the results are conservatively multiplied by a factor of four to account for compositing), and only one PAH (the noncarcinogenic PAH n-nitrosodiphenylamine) was above the Oregon soil cleanup levels presented in CAR 340-122-045.
  - On the basis of the elevated TPH, Time Oil requested that Crosby and Overton remediate the soil at the former truck washing area. In May 1989, Crosby and Overton removed approximately 300 yd<sup>3</sup> of soil from the area. Their notes from the excavation work indicate that they proceeded downward to groundwater. With truck washing trough dimensions of approximately 35 ft by 5 ft, and an assumption that groundwater was 13 ft below ground surface, rough calculations indicate that the soil removal in May 1989 likely extended over 4 ft laterally outward in all directions.
  - One post-excavation composite soil sample was obtained from at least three locations within the excavation (Crosby and Overton describes the samples as coming from the east wall, the bottom of the excavation, and the west wall), although there is information that suggests, but does not allow conclusive determination, that the sample was a composite of four individual samples. DEQ correctly notes that the sample was analyzed only for TPH; the sample result was 15 ppm. Multiplying by four to conservatively account for compositing yields a potential maximum TPH concentration of 60 ppm.

Although the post-excavation sampling did not address PCBs and PAH, the magnitude in the reduction of the concentration of a highly mobile contaminant (two orders of magnitude, from 6,170 to 15 ppm) achieved through an excavation that removed a significant volume of soil from around and below the former truck washing trough suggests that there is a small likelihood that levels of concern of additional contaminants remain in the former truck washing area. Therefore, we believe that diverting investigatory resources to this area is unjustified at this time.

In our meeting of July 24, DEQ stated that solvents are an additional concern in the former truck washing area, based on historical detection of solvents in sludge handled in the former

Crosby and Overton tank area. Again, due to the extensive soil removal effort conducted at the former truck washing area in 1989, concern regarding solvents potentially remaining in soil in this area is considered low. Therefore, we do not anticipate the need to address this area in Phase I and II of the RI.

2. The water pumped from Well M in 1991 was tested in 1991 as part of a site-wide groundwater sampling event. The results of the testing are provided in Attachment 4 (please note that Well M is included in both the initial groundwater screening and the quarterly sampling programs of the Phase II RI). Documentation responding to DEQ's request for information regarding treatment and disposal will be addressed under separate cover.
3. Per your recent verbal request, the original laboratory report for the dioxin/furan analyses conducted in 1990 and noted on page 2-6 of the work plan has been sent to DEQ under separate cover. Included with the data was a list of the toxicity equivalence factors used to convert the raw data to 2,3,7,8-TCDD equivalents. All future reporting of dioxin/furan data will include both the unconverted results and the equivalents. Unless otherwise instructed by DEQ, the toxicity equivalence factors noted in the letter (from EPA guidance) and provided in Table B-7 of the work plan, will be used to convert the raw data to 2,3,7,8-TCDD equivalents.
4. TPH was not identified as a constituent of concern in the listing on page 2-10 due to the lack of accepted toxicity factors for TPH used in evaluating risk. However, we have included in the list TPH indicator chemicals for which accepted toxicity factors are available (benzene, toluene, ethyl benzene, and xylenes), and have included TPH and tentatively identified compounds from the VOA and semi-VOA analyses in the analytical program for the RI/FS, to provide further certainty that this class of chemicals is not overlooked.

Time Oil submitted to DEQ, via a letter dated June 12, 1996, information used to determine whether pesticide analyses of soil and groundwater are justified for the RI/FS. We understand from our meeting with you on July 24, that DEQ concurs with our opinion that the information submitted with that letter supports dropping pesticide analyses from the Phase I and II RI/FS. Please inform us if DEQ does not agree with our conclusion.

5. The Phase I sampling data will provide current and expanded information on the chemistry of the stockpiled soil. This information will allow (1) verification/refinement of the list of constituents of concern for the stockpiled soil; (2) development of risk-based preliminary remediation goals (following verification of the risk parameters, such as exposure pathways, in the Phase I EA); and (3) evaluation of the appropriate remedial action for the stockpiled soil. As noted in Section 4, the sampling data also will be included with the preliminary Phase II sampling data to refine the list of analytical parameters to be used in later portions of the Phase II sampling. If it is determined that leachable PCP data are necessary to complete the FS, those analyses would be conducted as part of planned treatability studies.
6. Our records show that monitoring point D was a well installed by Riedel Environmental in May 1986. A well construction diagram for well D is provided in Attachment 5.

7. Time Oil acknowledges that information to support the proposed restriction of the beneficial well use survey (and therefore the evaluation of groundwater receptors) will need to be provided in the RI report. During the RI, if information is found that contradicts the assumption that the site is sufficiently isolated from groundwater users west of the Willamette River, then the RI beneficial well use survey will be expanded to include the area west of the Willamette River, within 1 mile of the Northwest terminal.
8. Time Oil intends to obtain DEQ approval for any modified analytical suite that Time Oil determines to be justified based on the analytical results from Phase I and the initial screening and analyses from Phase II. If background levels of metals are later determined to be appropriate for future evaluations, we suggest discussing the need for site specific samples with DEQ at that time.

As recommended by DEQ, at least one biased sample from the former PCP warehouse and one sample from each of the surface sampling areas will be submitted for laboratory analyses for the full suite of constituents. With the results from samples collected from the large stockpile and the samples containing the two highest concentrations of screening results for each screening constituent (PCP, TPH, and PCBs) collected from soil borings, these additional analyses should provide sufficient data (a minimum of 15 samples) to evaluate the appropriate constituents for subsequent analyses.

It is proposed that the correlation between the immunoassay screening techniques and the laboratory quantified analytical results be established using a frequency of confirmation of 1 in 20 samples, with a minimum of two confirmation samples (see response 10). If a poor correlation is observed based on this frequency, additional confirmation samples will be considered or the screening techniques will not be used to meet the objectives of the RI.

It is our intent to use the immunoassay technique to screen additional soil samples collected at depths/locations beyond the defined scope of the work plan, if determined necessary based on field observations to evaluate the extent of contamination.

9. The noted typographical error will be corrected in the work plan.
10. The work plan provides for analytical confirmation of the groundwater screening results at a frequency of 1 in 20 samples. With nine planned sampling locations, this could result in only one confirmation sample. As suggested by DEQ, for the groundwater sampling (and any other RI sampling), the confirmation program will be modified to always include a minimum of two confirmation samples, with one of the samples representing low/non-detect results from the screening, and one representing medium/high results. Tables 4-3 and A-2 (Attachment 3) have been revised to address this.
11. As requested by DEQ, the screens in the wells installed in the lower water-bearing zone will be 10 ft in length. Figure A-5 (Attachment 6) has been revised to address this, and the text in Section 4.2.2.2 of the work plan and Section 5.2 of Appendix A also will be revised to reflect this.
12. The only onsite wells that were not planned to be sampled quarterly for groundwater quality are wells 2, 3, N, P, and Q. Wells 2 and 3 were not initially planned for quarterly

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sampling due to concerns with the integrity of the construction of those wells. Plans to evaluate whether these wells could produce defensible water quality and water level data were included in section 4.2.2.8 of the work plan. Wells N, P, and Q could be added to the quarterly program. Because of the presence of free product that has been observed in these wells since April 1996, which shows that these wells are clearly impacted by hydrocarbons, and the fact that the two wells in the immediate vicinity to N, P, and Q, but closer to the Willamette River (Wells O and R) will be part of the quarterly program, we believe that the data to be obtained from these wells on a quarterly basis is not cost-effective. We would be happy to discuss this further with DEQ.

As suggested by DEQ, the work plan will be revised to explicitly state that groundwater samples from wells installed in areas in which PCBs are detected in soil will be analyzed for PCBs. Tables 4-4 and A-3 (Attachment 7) have been revised to reflect this.

13. As requested by DEQ, detailed plans for the pumping tests will be submitted to DEQ for review and approval, once developed.
14. As requested by DEQ, the final plans for management of investigation derived wastes will be communicated to DEQ prior to implementation.
15. To meet DEQ's request, we propose changing the reporting for the RI/FS to separate the RI and EA reports. We further propose to append to the RI reports a section that discusses the RI findings and the resulting list of contaminants of concern, exposure concentrations, and exposure scenarios planned to be used in the subsequent EAs. The Phase I RI report will state the assumptions, data, and risk parameters that provide the foundation for the Phase I preliminary remedial goals (PRGs) and an explanation of how the PRGs will be taken forward into the Phase I FS. The Phase II RI report will document the assumptions and risk parameters to be used in the Phase II EA. This change allows DEQ to comment on the EA before substantial work on the EA is completed. Figure 8-1 (Attachment 8) has been revised to reflect this proposed change; as well as to reflect a more realistic start date for the RI/FS.
16. As noted on page 5-3, each phase of the EA will include exposure assessments that address inhalation, as appropriate. Initially, default values and RI soil/dust data will be used to evaluate onsite (and offsite, if appropriate) exposures and risks due to inhalation. The same quantitative methods will be used to evaluate exposures to warehouse dust and airborne particulates, but it is expected that the exposure parameters (e.g., exposure times) will be different for inhalation of dust and soil particulates.
17. The Phase I sampling protocol for volatile organics will be modified, as discussed between DEQ and Landau Associates by phone on June 6 and noted in DEQ's comment.
18. In response to DEQ's suggestion, we propose to conduct volatile and semivolatile analyses on the first three soil samples for which a positive identification of DNAPL is indicated by field screening techniques (PCP is included in the semivolatile list using EPA method 8270). If additional samples containing DNAPL are identified, we propose consulting with DEQ as to whether additional quantitative analyses are necessary.

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19. EPA guidance specifies that well purging be monitored using pH, specific conductance, and temperature. We propose instrument monitoring of these parameters during well redevelopment and well purging and visual monitoring of turbidity. In our experience, not all of these parameters stabilize upon continued purging. In such cases, the judgment of the field staff will be used to determine whether sufficient purging has occurred to allow representative samples to be obtained. In such cases, the decision to proceed with sampling, and the rationale, will be noted on the field sampling form.

20. As requested by DEQ and discussed in our meeting of July 24, if PAH are identified as nondetect using Method 8270, then Method 8270 SIM also will be used to achieve PAH quantitation limits of 0.1 mg/kg and 0.1 µg/L, respectively. Tables B-4, -5, and -6 (Attachment 9) have been revised to address this.

#### OTHER COMMENTS

In our meeting of July 24, you expressed concern that the use of the terminology "Phase I, II," etc. for the RI/FS was confusing, in that the phases included divisions on the basis of operable units. You expressed a desire to have the term "phase" replaced with "subarea". We agreed to explore another term that better describes the different components of the site RI/FS, and have done so. However, we conclude that in fact, the term "phase" does best describe the divisions, which were originally set up on the basis of time-priority. This can be seen as follows:

- **Interim Action:** addressing, through removal and consolidation, the drums and small soil stockpile in the eastern portion of the facility. Confirmation testing should provide the basis for deciding whether further investigation in this area is needed, and if so, what priority those investigations require (i.e., which phase of the RI/FS should include this area).
- **Phase I:** evaluation of the issue which DEQ has indicated is their highest environmental priority at the site. Phase I establishes a focussed fast track evaluation of the material in the large soil stockpile, allowing the RI/FS tasks for this distinct environmental medium, which will lead to the identification of an appropriate remedy, to proceed quickly and in advance of other site RI/FS activities.
- **Phase II:** evaluation of the areas and media of next environmental priority at the site. Based on input from DEQ, these areas have been identified as the former PCP mixing area and the former Crosby and Overton tank area, and the media of highest priority are soil and groundwater.
- **Phase III:** evaluation of the areas and/or environmental media of next highest environmental priority at the site.

We have developed a schedule that initiates the Interim Action, Phase I, and Phase II at roughly the same time. However, as can be seen on the schedule in the RI/FS work plan, the RI/FS phases I

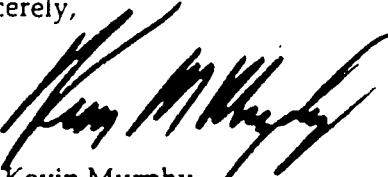
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and II progress at different speeds. It will not be long before the various phases become more distinct.

#### SUMMARY

We hope that the responses provided in this letter are satisfactory. We look forward to proceeding with the RI/FS upon receipt of written approval from DEQ.

Sincerely,



Mr. Kevin Murphy  
Senior Environmental Specialist

cc: Ms. Patricia Dost; Schwabe Williamson and Wyatt  
Ms. Leslee Conner; Landau Associates, Inc.

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Attachments 1 through 9

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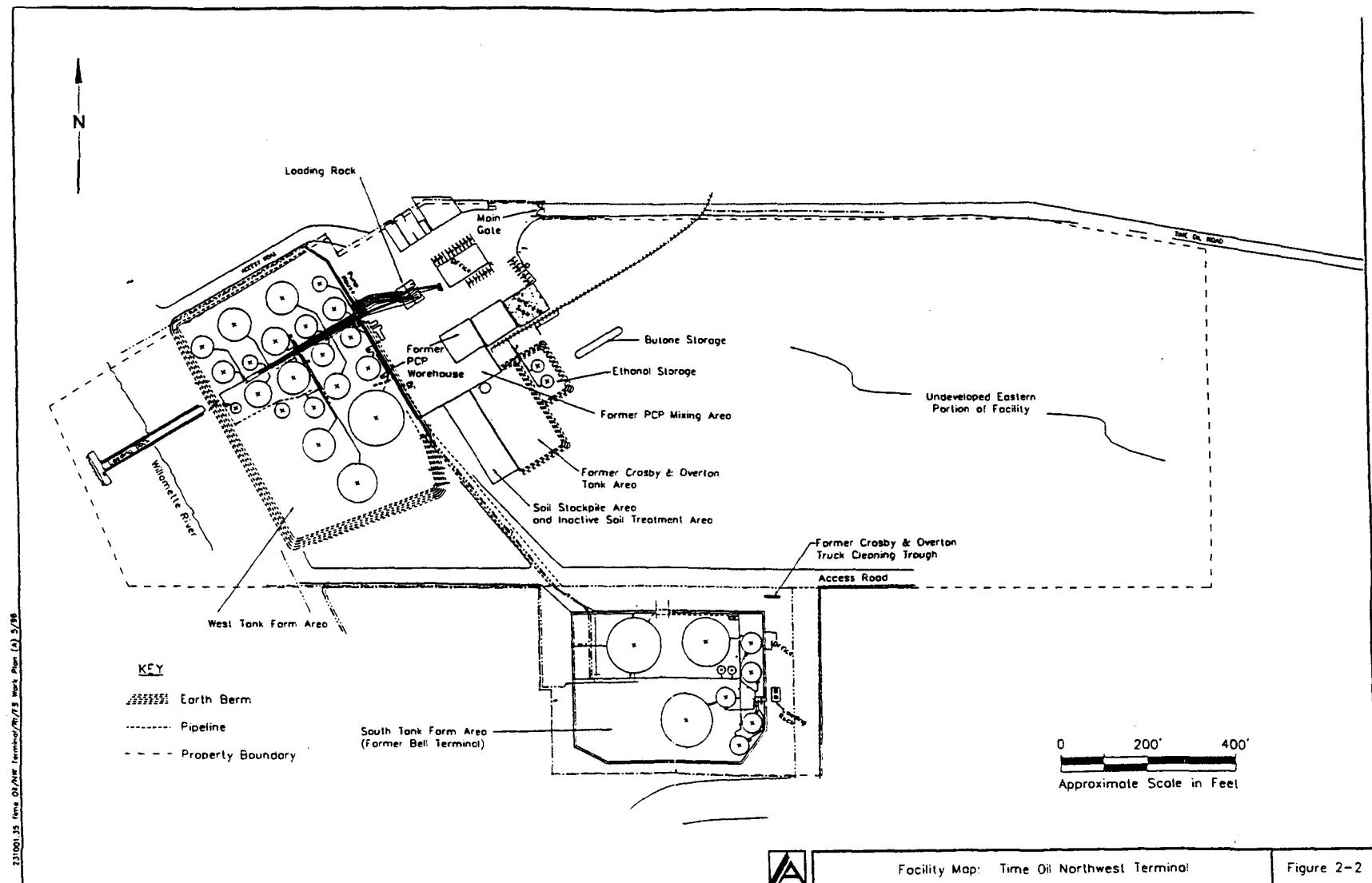
ATTACHMENT 1

## **Revised Figures 2-2 and C-1**

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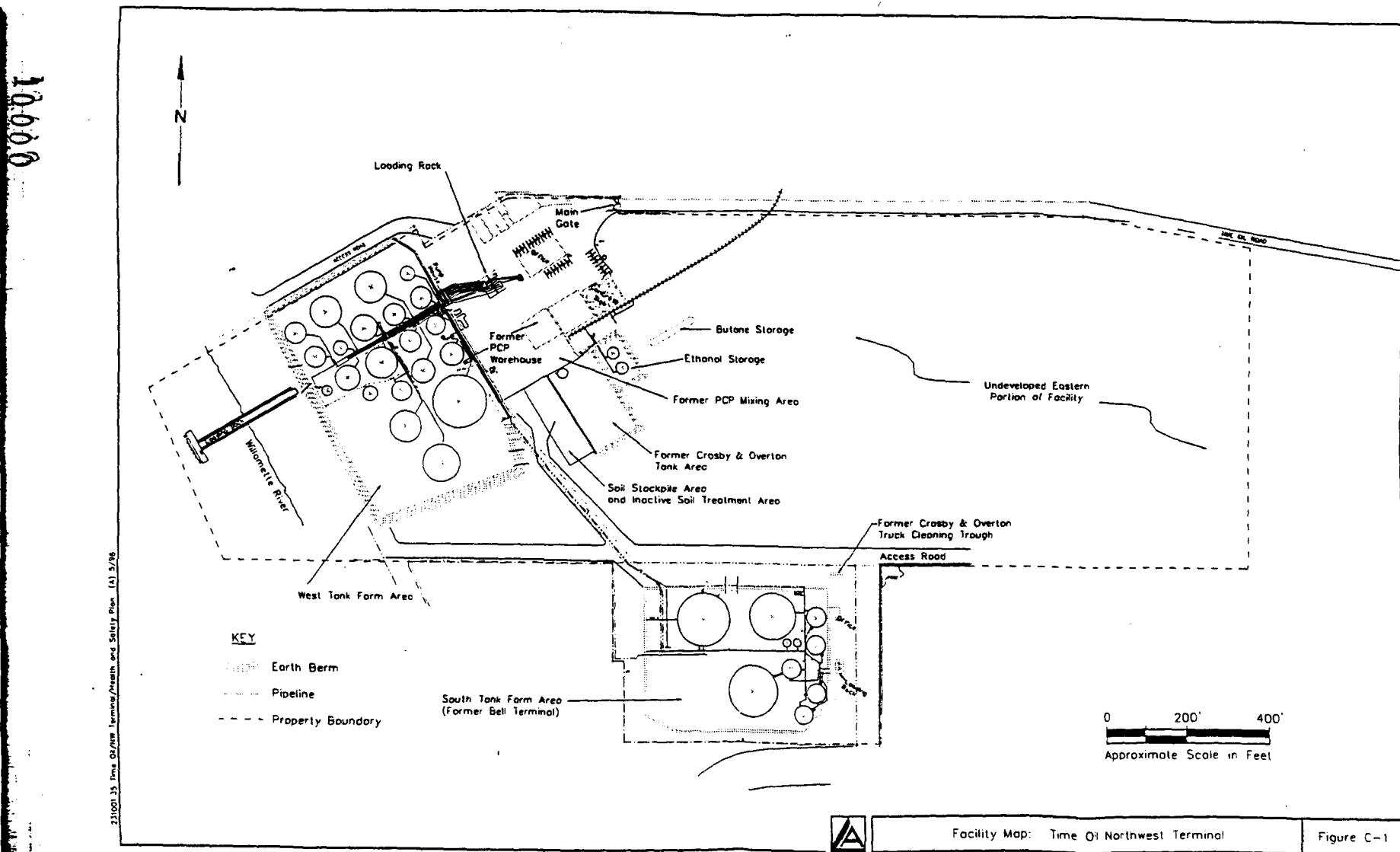
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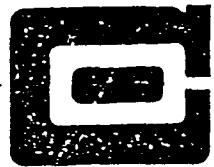
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ATTACHMENT 2

**Document Related to  
1989 "Zone 5" Soil Sampling**

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TOLS005244



# CROSBY & OVERTON, INC.

CD-20

5420 N. LAGOON  
PORTLAND, OREGON 97217  
283-1150 or 289-5749

HEAVY DUTY CLEANING  
24 HOUR SERVICE

P.O. BOX 1085  
20245 76th  
SOUTH KENT, WA 98031

June 14, 1989

Fred Proby  
Time Oil Co.  
2737 W. Commodore Way  
Seattle, Washington 98199

Re: Crosby & Overton's Remedial Activities

Dear Fred:

Enclosed you will find a report detailing the remedial activities of our operations area at your Portland facility, per your request.

I am requesting per your suggestions a response in writing confirming that you have received this report. It has been a pleasure working with you.

If you have any questions please call me at 503-283-1150.

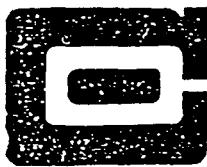
Sincerely,

Hubert Willer III  
Project Manager

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BZTO104(e)042066



# CROSBY & OVERTON, INC.

5420 N. LAGOON  
PORTLAND, OREGON 97217  
283-1150 or 289-5749

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24 HOUR SERVICE

P.O. BOX 1085  
20245 76th  
SOUTH KENT, WA 98031

## REMEDIAL ACTIVITIES REPORT TIME OIL PROJECT PORTLAND, OREGON

June 8, 1989

Prepared by:

Hubert H. Willer III  
Project Manager  
Crosby & Overton, Inc.  
Portland, Oregon

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Introduction:

Crosby & Overton leased two oil storage tanks and a piece of property used for a truck wash pit from Time Oil located at 12005 N. Burgard in Portland, Oregon. In an effort to terminate their lease with Time Oil, Crosby & Overton, Inc., at Time Oil's request, initiated a study and subsequent cleanup of the properties involved.

Sampling and Analysis:

On January 27, 1989, Fred Proby, an environmental specialist with Time Oil Company, developed a sampling plan to be performed by personnel from both Time Oil and Crosby & Overton (see attached letter).

The plan involved dividing the areas in question into 5 sampling zones (see diagram). A composite sample from each zone was analyzed for priority pollutants. Each individual sample was analyzed for PCB's. Samples were taken in the first four inches of soil in Zones 1, 2, 3, and 4. In Zone 5 (truck wash pit) 4 samples in two locations and two depth's were taken.

Upon receipt of the lab results (see attachments) Fred Proby requested that Zone 5 be remediated because relatively high levels of petroleum hydrocarbons were present and Zone 3 be remediated because two sample plots showed PCB levels over 50 ppm and 6 other plots showed levels over 10 ppm.

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Remedial Activities:

On May 16, 1989, Crosby & Overton proposed a remedial action plan to Fred Proby of Time Oil (see attachment). The activities were to include remediating Zone 5 by excavating the visible contaminated soil and disposing of it at a local approved landfill. A composite sample of the excavation would be taken to confirm visual results. Zone <sup>3</sup> ~~4~~ would be sampled using PCB screen kits to determine the dimensions of soil to be removed in sample plots A-9 and B-9.

In a phone conversation on May 17, 1989, verbal approval of the proposal was obtained. Mr. Proby expressed concern over the 8 samples from Zone 2 and Zone 3 that showed PCB levels over 10 ppm and he wanted each plot resampled to a depth of one foot and a composite sample analyzed for PCB's.

On May 17, 1989 remedial activities began (see field notes). Soil was excavated and disposed of at Metro's St. John's Landfill. Approval for disposal of this soil was granted by Rob Smoot, special waste engineer on March 29, 1989 (see attached permit). Approximately 300 yards of material were disposed of between the dates May 17 and May 19, 1989.

} Refers to  
Truck  
wash  
pit  
etc

On May 22, 1989 a composite sample of the excavation was taken under Fred Proby's direction. Also resampling of the plots in Zone 2 and 3 were accomplished on this date by Crosby & Overton personnel under the direction of Fred Proby and his

assistant. Approval for backfill of the excavation was given that morning during an on site visit by Crosby & Overton's General Manager, Darrell Winegar.

On May 23, 1989, sampling of plots A-9 and B-9 continued. Four samples were taken approximately 8 feet towards plots A-8 and B-8. These samples were taken within 4 inches of the surface and results indicated a level below 50 ppm. Sample plots A-9 and B-9 (within the proposed remedial actin area) were screened at a depth of 8 inches and results also proved to be below 50 ppm (see field notes). Based on the results of the soil screening tests a remedial action area was staked out (see photograph and diagram).

On May 26, 1989, four drums of material from within the confines of the "action area" were excavated and prepared for transportation (see photograph).

On June 1, 1989, lab analysis from samples collected in Zone 5, 3 and 2 were obtained. The pre-closure composite sample from Zone 5 (truck wash pit) indicated only 15 ppm total petroleum hydrocarbons. The states cleanup level is 500 ppm for this area using the proposed matrix and a diesel standard (see lab results). The composite sample from the eight plots over 10 ppm requested by Fred Proby indicated levels of only 2 ppm. PCB's.

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as of  
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The composite sample taken from plots A-9 and B-9 at an eight inch depth resulted in a 1 ppm level of PCB.

Conclusions:

In light of the extensive sampling and remedial activities that Crosby & Overton has performed in conjunction with Time Oil's representatives, Crosby & Overton has no further obligations or liabilities at this site because of the following reasons.

- I. Extensive sampling of all areas that Crosby & Overton, Inc. occupied resulted in non-regulated levels of priority pollutants.
- II. Zone 5 was remediated to below the states level of action using the proposed matrix standard.
- III. Levels of PCB remaining in Zone's 1 through 5 are far below federal and state treatment standards of 50 ppm.

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SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



PHONE 285-2400  
CABLE ADDRESS: TIMOIL  
(FAX) 206-283-8036

## TIME OIL COMPANY

2737 WEST COMMODORE WAY  
P.O. BOX 24447, TERMINAL STATION

SEATTLE, WASHINGTON 98199-1233  
SEATTLE, WASHINGTON 98124-0447

January 27, 1989

Crosby & Overton, Inc.  
Attn: Mr. Darrell Winegar  
5420 N. Lagoon  
Portland, OR 97217

Dear Mr. Winegar:

Pursuant to our meeting on January 18, 1989, I have prepared a sampling plan and analytical procedure for your operations area at our terminal in Portland. Attachment 1 is a plot plan showing 59 sample locations around and in the two oil storage tanks. Attachment 2 shows 4 sample locations for the truck wash pit. For the initial sampling in the tank area, we feel surface samples (4" to 6") will be sufficient since polychlorinated biphenyls (PCBs) do not readily migrate downward. These samples can be collected by our mutual personnel with a shovel or trowel. Samples from beneath the tanks will require holes to be cut. These should be at locations where leaks were most likely. In absence of an obvious leak site, the points indicated on the sample plan should be used. The truck wash pit will need to be sampled at the "surface" (below the new gravel) and at a depth of 4 to 5 feet. This can be accomplished by backhoe. If a problem is found at any locations, we would want further samples to determine the depth distribution.

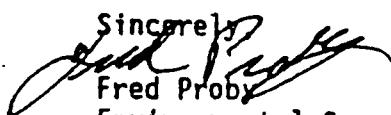
The analytical procedure will involve several steps. As the sample plan for the tank area shows, I have designated four "zones". The eight samples (four locations and two depths) from the truck wash pit will comprise a fifth zone. Samples from each zone would be composited into a single sample representing that zone. We will want a "priority pollutant" analysis, to include pesticides and metals, on each composite sample. The detection limits are low enough that even with 18 samples, any contaminants posing a problem will be evident. If something (other than pentachlorophenol) does show up, then the individual samples from that zone will be analyzed for the particular compound of concern.

We would like Farr, Friedman & Bruya, Inc to manage the analytical procedures. They would prepare the laboratory composites and send them to Analytical Resources, a "CLP" lab here in Seattle, for the priority pollutant analysis (\$1,120 each). Farr, Friedman & Bruya would perform individual analyses for PCBs (\$85 each) and any other compound of concern identified by the priority pollutant analysis. This approach will save considerable expense since Farr, Friedman & Bruya charges much less than a CLP lab.

If you have any questions, please do not hesitate to call me.

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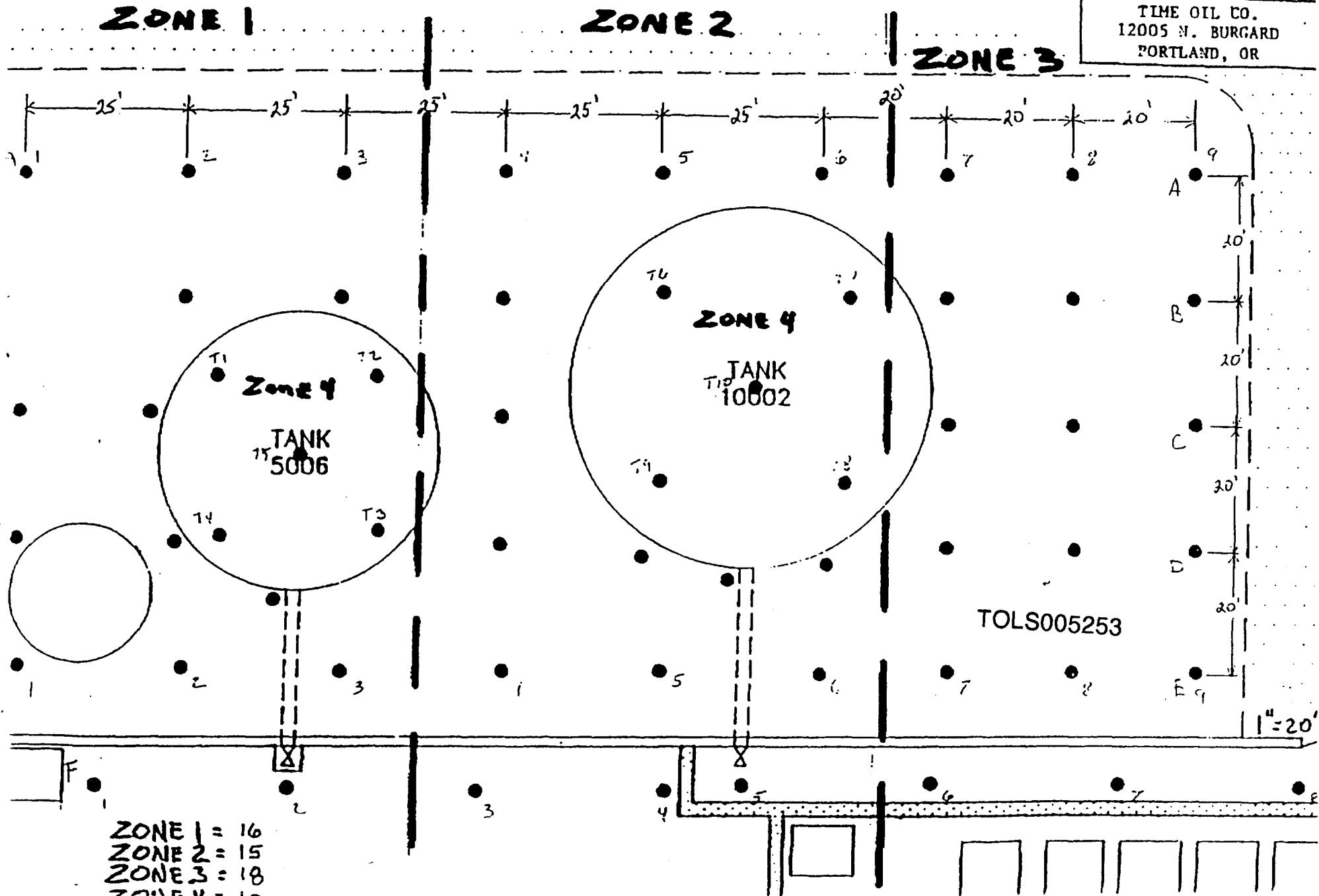
Sincerely,  
  
Fred Prob  
Environmental Specialist

Attachments a/s  
cc: John Hubbard; Crosby & Overton, Long Beach

BZTO104(e)042073

TANKS 5006T and 10002  
NORTHWEST TERMINAL  
scale: 1"=20'

TIME OIL CO.  
12005 N. BURGARD  
PORTLAND, OR



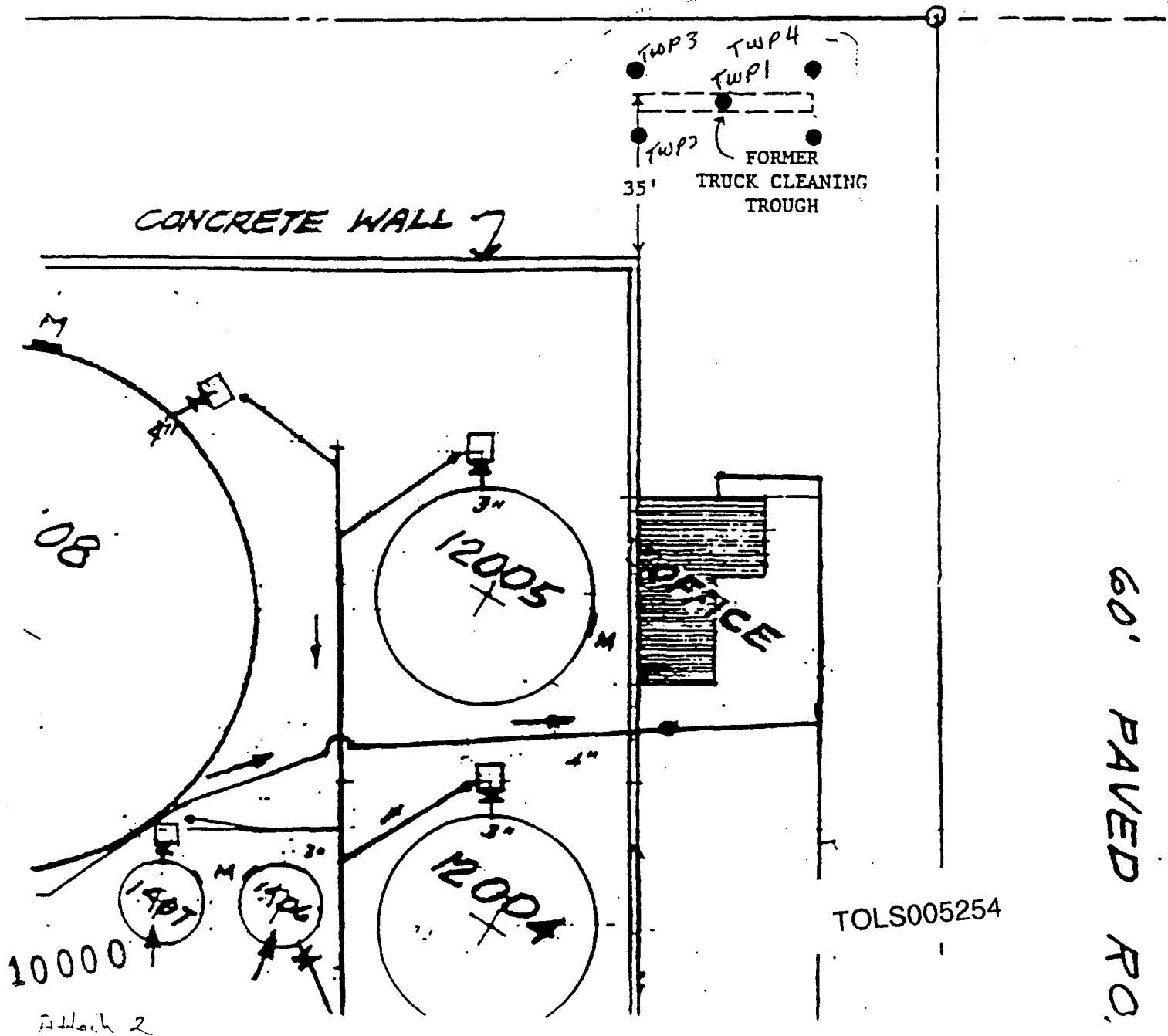
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DETAIL  
 NE CORNER OF DIKE WALL  
 BELL TERMINAL  
 scale: 1"=30'  
 TIME OIL CO.  
 12005 N. BURGARD  
 PORTLAND, OR



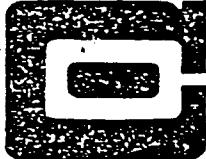
CROSBY & OVERTON

# ZONE 5



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BZTO104(e)042075



# CROSBY & OVERTON, INC.

5420 N. LAGOON  
PORTLAND, OREGON 97217  
283-1150 or 289-5749

HEAVY DUTY CLEANING  
24 HOUR SERVICE

P.O. BOX 1085  
20245 76th  
SOUTH KENT, WA 98331

May 16, 1989

Fred Proby  
Environmental Specialist  
Time Oil  
P.O. Box 24447 Terminal Station  
Seattle, Washington 98124

Re: Remediation of Operations Area, Portland, Oregon

Dear Fred:

Concerning the remedial work needed at the Portland facility, I propose the following action plan:

### Zone 5

Removal and disposal of contaminated soils to the standard of "sight and smell" which is Oregon's Department of Environmental Quality's (DEQ) existing policy after which a composite sample would be taken and analyzed for TPH levels.

The soil has been approved for disposal at Hillsboro Landfill by Charlie Gray with the DEQ.

The soil will be excavated and transported by Crosby & Overton personnel. The work will be supervised by qualified hazardous materials technician.

### Zone 2

Crosby & Overton proposes the following for this area:

No remedial action is necessary for this area. PCB levels found in this area are non regulated (under 50 ppm). Errors in laboratory analysis would have to exceed 400% for this soil to be regulated. An error of this size is highly improbable.

### Zone 3

TOLS005255

Crosby & Overton proposes the following action plan for this area:

First, sample plots A-9 and B-9 will be resampled at various depths and dimensions to determine the exact amount of soil that

1000

-

will be required to be removed. This determination is of the utmost importance since disposal costs of this material is very expensive.

The soil from this area will be removed, manifested and disposed of at Envirosafe Services of Idaho, (ESI), where Crosby & Overton has an established profile for this material. Hence, remedial activities can begin without delay.

Concerning sample plots C-7 and C-8 an error of over 100% would have to have been made to make these soils a concern for remedial action. Therefore, Crosby & Overton proposes no work for this area.

Time Schedule

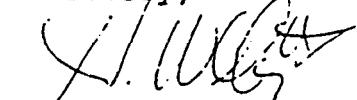
Crosby & Overton would like to start work on Zone 5 on May 17, 1989 completing these activities by May 19, 1989. Again, approval has been granted for disposal and we would like to start right away.

Work on Zone 3 would commence on May 22, 1989 and be completed by May 24, 1989. Again, we have an on going profile at ESI for this material so we can dispose of it quickly.

It is our understanding that you have another customer waiting to use this area and we would like to expedite this matter of cleanup in your best interests.

If you have any questions about this proposal please call me.

Sincerely,



Hubert Willer  
Project Manager

TOLS005256

10000



ML RO

2000 S.W. First Avenue  
Portland, OR 97201-5398  
503/221-1646

# Application to Dispose of Special Wastes

INSTRUCTIONS: Please read important information on other side. Type, or print heavily in ink.  
The person responsible for accuracy of information must sign. Return all copies of completed application and any supporting information to Metro along with a check for the \$25 application fee.

Office use only  
Permit no. 1718  
Expires 5/29/89

Applicant's Name John J. Miller

Address 1111 N. 1st Street City Portland Zip Code 97107

Contact Person John J. Miller Phone (503) 221-1150

Description of Special Waste (waste composition and physical, chemical, manufacturing process from which waste originated)

One time disposal? / yes / no Disposal frequency (if more than one time) \_\_\_\_\_

Quantity: (gallons, drums, lbs., cubic yards) 100 Quantity per year \_\_\_\_\_

Hazardous / yes / no How did you determine whether hazardous or not? Material Safety Data Sheet \_\_\_\_\_

test results / other see lab results (enclose documents)

Handling and spill cleanup directions no special instructions

Transporter John J. Miller

Previous permit for this waste, if any. Number \_\_\_\_\_

NO SEALED EMPTY CONTAINERS WILL BE ACCEPTED. If empty pesticide containers only: (a) Describe material originally in containers \_\_\_\_\_

(b) Describe method of cleansing, rinsing and preparation of containers \_\_\_\_\_

Certificate of Accuracy of Description: This is to certify that the above described materials are properly classified, identified, packaged, marked, labeled, cleansed, rinsed and prepared as indicated above.

X - Signature John J. Miller Date March 27, 1989

(also type or print name) John J. Miller

DEQ Review: The above described special waste or empty container(s) is approved \_\_\_\_\_ disapproved \_\_\_\_\_  
for disposal at the St. Johns Landfill.

Signature \_\_\_\_\_ Date \_\_\_\_\_

(also type or print name) \_\_\_\_\_

Special Instructions \_\_\_\_\_

Metro Action: Disposal of the above described special waste or empty container(s) is approved / disapproved /

for disposal at the St. Johns Landfill at a disposal rate of \$ 46.25 per ton; 1500 per trip minimum charge.

Signature John J. Miller Date 3/29/89

(also type or print name) \_\_\_\_\_

GENERAL INSTRUCTIONS: Appointment required 24 HOURS prior to each disposal. Call 286-9614. Cash on disposal (NO CHECKS) or have prior account established. To establish an account, call Accounting at 221-1646.

SPECIAL INSTRUCTIONS: \_\_\_\_\_

10000

TOLS005257

-8-88/85355

BZTO104(e)042078

TIME OIL - FIELD NOTES

May 17, 1989

Received OK from Proby to start. Excavation began at 0800. Load - 6. Approximately 100 yds. removed and disposed at St.Johns Landfill under Permit No. 1718.

May 18, 1989

Excavation resumed at 0800. Approximately 100 yards removed and disposed at St. Johns Landfill.

May 19, 1989

Excavation resumed at 0800

Approximately 100 yards removed at groundwater encountered. No samples were taken. Talked with Fred Proby. He is going to visit site on 5/22 to over see sampling zone 2 & 3. Wait also for Zone 5 sampling.

May 22, 1989

Meet with Proby on site at 1000. He OK'd backfill and showed me a place for fill removal on site.

Fill Pile - fill appears to be clean and has no apparent odor or discoloration.

Zone 3

Sampling began under Fred Proby's direction. Sample plots over 10 ppm PCB were resampled at a depth of up to 1 foot per Fred Proby as follows:

A-9  
B-9 C-8 C-7 D-5 a by valve  
C-9 D-8  
D-9

TOLS005258

11000  
Soil appeared to be discolored in most sample plots to a depth of 8 inches. Also a hard rock like layer was encountered as this depth.

15000  
A composite of A-9 and B-9 were sampled for PCB's at 8 inches.

A composite of the eight above samples were sampled at a depth of up to 1 foot and analyzed for PCB content.

*Composite of  
Howard Saylor*

At 11:45 under Proby's direction a composite sample was taken for Zone 5's excavation. Areas sampled were East wall, bottom excavation and west wall. Samples were logged under Chain of Custody and put in coolers and sent to, Pacific Analytical laboratory to be analyzed for total Petroleum Hydrocarbons (TPH).

May 23, 1989

Backfilled excavation at Zone 5

Screen sampled soils in Zone 3

	<u>Location</u>	<u>Result</u>
Sample 1	8' from A-9	<50 ppm
Sample 2	8' from A-9	<50 ppm
Sample 3	8' from B-9	<50 ppm
Sample 4	8' from B-9	<50 ppm

Area is staked out for remedial action.

May 26, 1989

Welders in Zone 3 & 2 warned to use level C protection. Material from Zone 3 (A-9; B-9) in staked out area started to be drummed and labeled at 1300. Welders are warned again to leave or use level C. Material is being drummed with manual labor and equipment - trackhoe.

All personal is using Level C protection. On site welders were asked to leave during remedial activities. Neil Wallis OK'd his welders to remain in the remedial zone without protection. Used trackhoe to check various spots for staining.

A total of four drums of contaminated soils have been packaged and labeled. Drums are to remain on site. Proposed disposal as at E.S.I. in the middle of June.

*1150000  
11000*

TOLS005259



9405 S.W. Nimbus Ave., Beaverton, OR 97005 (503) 644-0680

PAL Report #: 89-0120  
 Client : Crosby & Overton  
 Date : 3-1-89  
 Sample ID : Time Oil  
 Analysis : BNA's by EPA 8270  
 PCB's by EPA 8080

RESULTS

<u>Sample</u>	<u>Compound</u>	<u>Results (ug/g)</u>
Zone #1	Anthracene	1.2
	Benzo(a)pyrene	1.9
	Benzo(b)fluoranthene	14
	Benzo(ghi)perylene	3.0
	Chrysene	3.8
	Fluoranthene	5.1
	Phenanthrene	0.36
	Pyrene	8.1
	PCB's	0.9
Zone #2	Anthracene	2.9
	Benzo(a)pyrene	2.9
	Benzo(b)fluoranthene	4.6
	Benzo(ghi)perylene	6.7
	Chrysene	1.8
	Fluoranthene	2.8
	Phenanthrene	1.7
	Pyrene	7.5
	PCB's	7
Zone #3	Anthracene	8.9
	Benzo(a)pyrene	9.4
	Benzo(b)fluoranthene	13
	Benzo(ghi)perylene	20
	Chrysene	6.1
	Fluoranthene	12
	Fluorene	0.74
	Phenanthrene	10
	Pyrene	30
	PCB's	10

11000

TOLS005260



8405 S.W. Nimbus Ave. Beaverton, OR 97005 (503) 644-0660

PAL Report #: 89-0120  
Client : Crosby & Overton  
Date : 3-1-89  
Sample ID : Time Oil  
Analysis : BNA's by EPA 8270  
PCB's by EPA 8080

RESULTS

<u>Sample</u>	<u>Compound</u>	<u>Results (ug/g)</u>
Zone #4	Acenaphthene	21
	Acenaphthylene	8.6
	Anthracene	64
	Benzo(a)pyrene	7.0
	Benzo(b)fluoranthene	5.0
	Chrysene	16
	2,4-Dichlorophenol	3.6
	Fluoranthene	7.2
	Fluorene	20
	N-Nitrosodiphenylamine	28
	Naphthalene	12
	Phenanthrene	67
	Pyrene	39
	PCB's	4
Zone #5	Acenaphthene	2.1
	Anthracene	0.72
	Fluoranthene	0.33
	Fluorene	2.7
	N-Nitrosodiphenylamine	3.2
	Naphthalene	5.2
	Phenanthrene	4.5
	PCB's	0.2

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TOLS005261

BZTO104(e)042082



PACIFIC  
ANALYTICAL  
LABORATORY Inc

9405 S.W. Nimbus Ave. Beaverton, OR 97005 (503) 644-0660

PAL Report #: 89-0120  
Client : Crosby & Overton  
Date : 3/01/89  
Sample ID : Time Oil  
Items : Five Soil Composites

**ANALYSIS**

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Total Petroleum					
Hydrocarbons (EPA 418.1), mg/kg	--	--	--	--	6170
Cyanide, mg/kg	<1	<1	<1	<1	<1

**TOTAL METALS - mg/kg (per EPA SW 846 3050, 7000 series)**

	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Antimony	50	50	40	40	50
Arsenic	4.1	4.9	9.3	5.5	2.2
Barium	170	200	200	180	160
Cadmium	0.6	0.9	0.8	0.8	0.6
Chromium	15	49	48	24	48
Copper	350	180	94	37	210
Lead	39	200	170	170	34
Mercury	0.1	1.4	2.6	4.9	<0.02
Nickel	18	39	48	28	20
Selenium	<0.005	<0.005	<0.005	<0.005	<0.005
Silver	0.8	0.9	0.7	0.4	0.7
Thallium	10	10	10	<10	10
Zinc	160	170	170	87	82

Respectfully,

*Linnet O'Hanlon*  
Linnet O'Hanlon  
Chemist

Reviewed by: *[Signature]*

11000

TOLS005262



PACIFIC  
ANALYTICAL  
LABORATORY Inc

9405 S.W. Nimbus Ave., Beaverton, OR 97005 (503) 644-0660

Page 2  
Crosby & Overton  
April 20, 1989

PAL REPORT NUMBER: 89-0203  
P.O./JOB NUMBER: 23513/06354  
REFERENCE: Time Oil  
DATE REQUESTED: 3/14/89  
ITEMS: 53 Soil Samples

PCB's by EPA 8080

<u>Zone 1</u>	<u>ppm</u>	<u>Zone 2</u>	<u>ppm</u>	<u>Zone 3</u>	<u>ppm</u>
A1	ND	A4	1.2	A7	2.8
A2	<0.29	A5	0.40	A8	1.5
A3	0.33	A6	4.8	A9	59
B1	0.43	B4	5.6	B7	2.8
B2	ND	C4	0.92	B8	7.5
B3	0.16	D4	0.63	B9	68
C1	0.19	D5A	2.2	C7	22
C2	0.36	D5B	12	C8	20
D1	ND	D6	ND	C9	11
D2	0.23	E4	0.49	D7	1.6
E1	ND	E5	1.7	D8	15
E2	0.38	E6	2.6	D9	13
E3	5.1	F3	0.19	E7	0.62
F1	ND	F4	ND	E8	4.8
F2	ND	F5	2.3	E9	1.1
				F6	0.52
				F7	0.82
				F8	2.3

Zone 4      ppm

T2	11
T3	0.17
T5	ND
T6	0.11
T7	0.12

ND = Not Detected  
Detection Limit - 0.10 ppm

Respectfully,

*Kim Chiusolo*

Kim Chiusolo  
Chemist

11000

*Linnet O'Hanlon*

Linnet O'Hanlon  
Chemist

TOLS005263

BZTO104(e)042084



PACIFIC  
ANALYTICAL  
LABORATORY Inc

8405 S.W. Nimbus Ave. Beaverton, OR 97005 (503) 644-0660

April 20, 1989

Crosby & Overton  
5420 N. Lagoon Avenue  
Portland, OR 97217

Attn: Darrel Winegar

PAL REPORT NUMBER: 89-0203  
P.O./JOB NUMBER: 23513/06354  
REFERENCE: Time Oil  
DATE REQUESTED: 3/14/89  
ITEMS: 53 Soil Samples

#### ANALYSIS

E.P. Toxicity - mg/L (per EPA SW-846, 1310, 7000 series)

#### Zone 2 Composite

Antimony	<1
Arsenic	<0.001
Barium	<1
Cadmium	<0.02
Chromium	<0.1
Copper	0.04
Lead	<0.05
Mercury	<0.001
Nickel	<0.05
Selenium	<0.001
Silver	<0.02
Thallium	<1
Zinc	0.62

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TOLS005264

BZTO104(e)042085



PACIFIC  
ANALYTICAL  
LABORATORY Inc

June 1, 1989

Crosby & Overton  
5420 N. Lagoon  
Portland, OR 97217

Attn: Hubert Willer

PAL REPORT NUMBER: 89-0471B  
P.O./JOB NUMBER: 23513 Time Oil  
DATE SUBMITTED: 5/24/89  
ITEMS:

Two Soil Samples: Composite of 8 samples  
over 10 ppm Zone 2 & 3  
Composite of excavation  
in Zone 5

Composite 2 & 3  
15 of 8 samples  
Any one sample  
could be  
Composite  
PCB limit  
PCB limit  
# 5  
Composite of  
excavation  
in Zone 5  
is a composite  
of 8 samples

## ANALYSIS

METHOD: PCB per EPA 808/8080  
All values in mg/kg (ppm)

	<u>Composite</u> <u>Zone 2 &amp; 3</u>	<u>Detection</u> <u>Limit</u>
PCB	2	0.1

METHOD: TPH per EPA 418.1 (IR)  
All values in mg/kg (ppm)

	<u>Composite</u> <u>Zone 5</u>	<u>Lab</u> <u>Blank</u>	<u>Detection</u> <u>Limit</u>
TPH	15	ND	5

ND = None Detected

11000

Respectfully,

Kim Chiusolo

Kim Chiusolo  
Chemist

Howard Holmes  
Howard Holmes  
Chemist

TOLS005265

BZTO104(e)042086



9405 S.W. Nimbus Ave., Beaverton, OR 97005 (503) 644-0660

June 1, 1989

Crosby & Overton  
5420 N. Lagoon  
Portland, OR 97217

Attn: Hubert Willer

PAL REPORT NUMBER: 89-0471A  
P.O./JOB NUMBER: 23513 (Time Oil)  
DATE SUBMITTED: 5/24/89  
ITEM: One Soil Sample (A9,B8)

#### ANALYSIS

METHOD: PCB per EPA 608/8080  
All values in mg/kg (ppm)

	<u>Sample</u>	<u>Detection Limit</u>
PCB's	1	0.1

Respectfully,

Kim Chiusolo  
Kim Chiusolo  
Chemist

Reviewed by:

2 samples composited  
Analytical results  
1 ppm  
1 sample could be  
2 ppm

11000

TOLS005266

BZTO104(e)042087

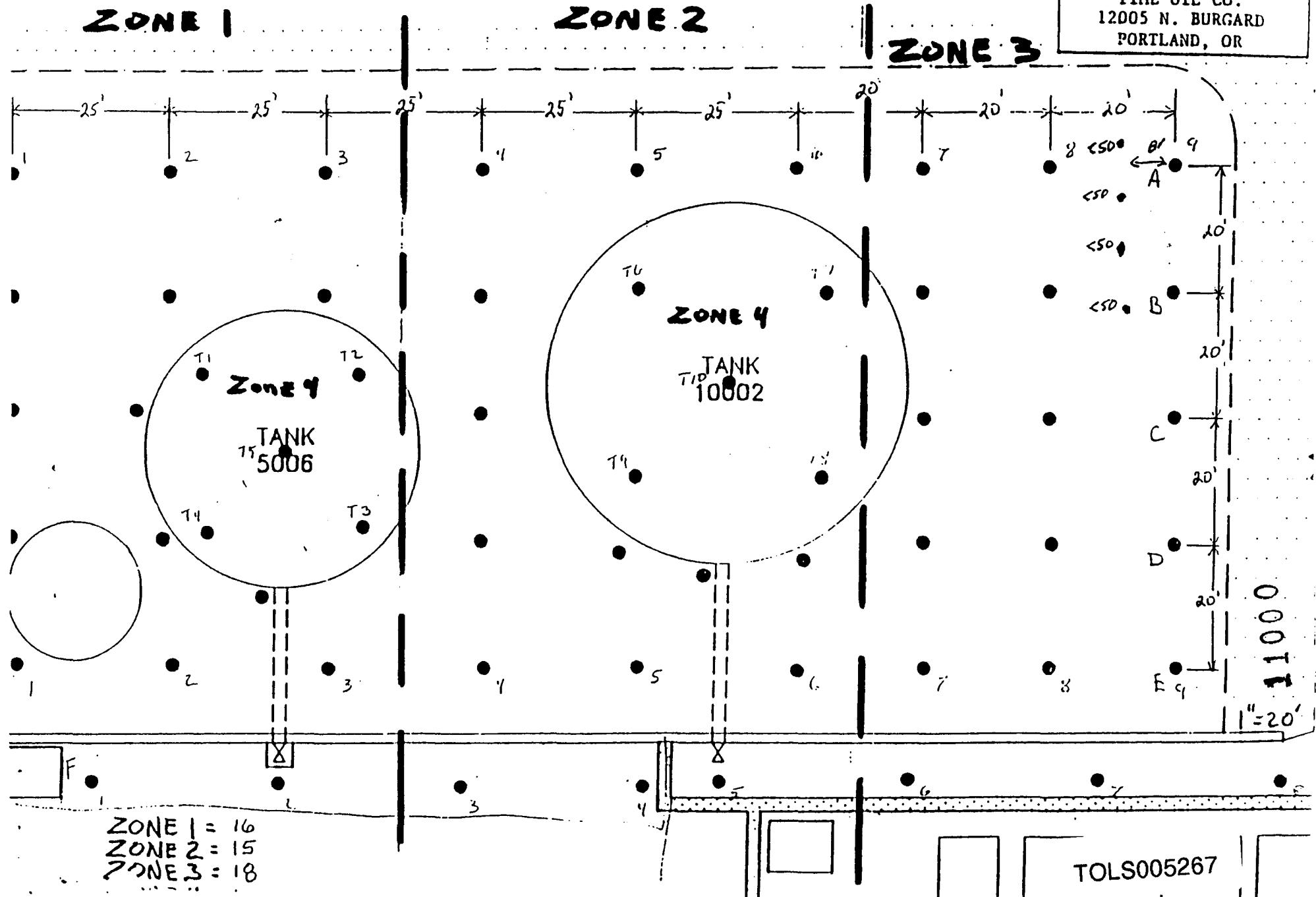
# PCB Action Area

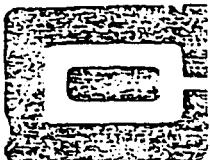
**ZONE 1**

**ZONE 2**

**ZONE 3**

TANKS 5006T and 10002  
NORTHWEST TERMINAL  
scale: 1" = 20'  
TIME OIL CO.  
12005 N. BURGARD  
PORTLAND, OR





# CROSBY & OVERTON, INC.

5420 N. LAGOON  
PORTLAND OREGON 97217  
283-1150 or 289-5749

HEAVY DUTY CLEANING  
24 HOUR SERVICE

P.O. BOX 1035  
20245 76th  
SOUTH KENT, WA 98031



PCB Action Area



11000

TOLS005268

ATTACHMENT 3

## **Revised Tables 4-3 and A-2**

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TOLS005269

TABLE 4-3  
PLANNED SOIL SAMPLE DEPTHS AND ANALYSES  
PHASE II REMEDIAL INVESTIGATION

Location	Total Depth			Soil Sample Depth												Chemical Analyses <sup>(a)</sup>						Fate and Transport Analyses				
				Lithologic			Chemical																			
	1-2 ft Inert Containing Layer	5-10 ft Inert Lower Zone	1-2 ft Inert Native Material	2.5 ft Minerals	Coatings	Continuous Water Confining Unit	Continuous for DNAPL	0-4 inches DGS	Below Base of Fr.	Near Water Table	Base of Upper Zone	Confining Unit	Top of Lower Zone	Water Fr.	Hod Depth Samples	Semivolatiles	Volatile	Chlorinated Phenols	TPH	Priority Pollutant Metals	PCBs	Dioxin/Furans	Field Screening	Grain Size <sup>(b)</sup>	Total Organic Carbon	K <sub>v</sub> of Confining Unit
Location																										
Borings: Biased																										
LB1	x					x			x	x	x												x <sup>(c)</sup>		x <sup>(d)</sup>	
LB2-LB7	x				x	x	x	x	x	x	x											x		x <sup>(e)</sup>		
LB8-LB10		x	x					x							x								x <sup>(f)</sup>			
Borings: Random																										
LB11, LB14, LB15	x			x	x	x	x	x	x	x	x	x	x	x	x <sup>(g)</sup>	x <sup>(h)</sup>	x <sup>(i)</sup>	x <sup>(j)</sup>	x <sup>(k)</sup>	x <sup>(l)</sup>	x <sup>(m)</sup>					
LB12-LB13	x			x	x	x	x	x	x	x	x	x	x	x	x <sup>(g)</sup>	x <sup>(h)</sup>	x <sup>(i)</sup>	x <sup>(j)</sup>	x <sup>(k)</sup>	x <sup>(l)</sup>	x <sup>(m)</sup>					
LB17-LB19; LB21-LB23	x			x	x	x	x	x	x	x	x	x	x	x	x <sup>(g)</sup>	x <sup>(h)</sup>	x <sup>(i)</sup>	x <sup>(j)</sup>	x <sup>(k)</sup>	x <sup>(l)</sup>	x <sup>(m)</sup>	x				
LB16, LB20	x			x	x	x	x	x	x	x	x	x	x	x	x <sup>(g)</sup>	x <sup>(h)</sup>	x <sup>(i)</sup>	x <sup>(j)</sup>	x <sup>(k)</sup>	x <sup>(l)</sup>	x <sup>(m)</sup>	x				
Surface Soil																										
LS1, LS3	x				x			x	x	x	x				x							x <sup>(n)</sup>				
LS2, LS4		x	x					x							x							x <sup>(n)</sup>				
Wells																							x	x		
LW1S	x				x	x									x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>		x	x		
LW1D		x			x	x	x	x	x	x	x	x	x	x	x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>			x		
LW2S	x					x				x	x	x			x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>	x <sup>(v)</sup>		x	x	
LW3D		x		x	x	x	x	x	x	x	x	x	x	x	x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>	x <sup>(v)</sup>	x	x	x	
LW4S	x			x	x	x									x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>		x	x		
LW4D		x			x			x		x	x	x	x	x	x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>				x	
LW5S	x			x		x	x	x	x	x	x	x	x	x	x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>	x	x	x		
LW6D		x			x	x	x <sup>(g)</sup>	x	x	x	x	x	x	x	x <sup>(o)</sup>	x <sup>(p)</sup>	x <sup>(q)</sup>	x <sup>(r)</sup>	x <sup>(s)</sup>	x <sup>(t)</sup>	x <sup>(u)</sup>	x	x	x	x <sup>(n)</sup>	

(a) Collection of soil samples for chemical analysis will be sequenced. Phase I RI soil stockpile samples and immunoassay field screening results for the Phase II RI biased soil samples will be used to determine the list of chemical parameters for the remaining Phase II soil and groundwater samples.

(b) Grain size and total organic carbon analyses will be conducted on saturated zone samples only.

(c) K<sub>v</sub> = vertical hydraulic conductivity.

(d) Samples with the two highest concentrations of PCP, TPH, and PCBs, using the immunoassay technique will be sent to the laboratory for semivolatiles, volatiles, chlorinated phenols, TPH, priority pollutant (PP) metals, and PCBs. A minimum of 2, and up to 5 percent of the samples (including the two highest concentration samples) will be sent to the laboratory for confirmation analyses and will include samples having nondetect to medium range immunoassay concentrations.

(e) Performance of analysis contingent on results from Phase I RI soil samples and Phase II RI biased soil samples (see note (a)).

(f) The locations for any additional dioxin/furan analysis will be determined based on field observations and the field screening results for PCP.

(g) The containing unit may not be present at this location.

TOLS005270

TABLE A-2

PLANNED SOIL SAMPLE DEPTHS AND ANALYSES  
PHASE II REMEDIAL INVESTIGATION

Location	Total Depth			Soil Sample Depth										Chemical Analyses <sup>(a)</sup>					Fate and Transport Analyses							
	1-2 ft into Covering Layer	5-10 ft into Lower Zone	1-2 ft into Native Material	2.5 ft intervals	Lithologic	Continuous	Continuous Within Containing Unit	Continuous for DNAPL	0.6 inches BGS	Below Base of Fal	Nearest Water Table	Base of Upper Zone	Containing Unit	Top of Lower Zone	Within Fal	Hold Diesel Samples	Semi-volatiles	Chlorinated Phenols	Priority Pollutant Metals	PCBs	Dust/Fines	Field Screening	Grain Size	Total Organic Carbon	K <sub>v</sub> of Containing Unit	
<b>Borings: Biased</b>																										
LB1	x					x			x		x		x									x <sup>b</sup>				
LB2-LB7	x			x		x		x		x		x										x <sup>b</sup>				
LB8-LB10		x		x				x						x								x <sup>b</sup>				
<b>Borings: Random</b>																										
LB11, LB14, LB15	x			x		x	x	x	x	x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>				
LB12-LB13	x			x		x	x	x	x	x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>				
LB17-LB19; LB21-LB23	x			x		x		x		x		x		x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x			
LB16, LB20	x			x		x	x	x	x	x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x			
<b>Surface Soil</b>																										
LS1, LS3	x				x			x		x	x			x								x <sup>b</sup>				
LS2, LS4		x		x			x							x								x <sup>b</sup>				
<b>Wells</b>																										
LW1S	x			x		x																x	x			
LW1D		x		x		x		x		x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>				
LW2S	x				x				x	x	x					x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	
LW3D	x			x		x		x		x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	
LW4S	x			x		x																x <sup>b</sup>			x	x
LW4D	x				x		x		x	x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	
LW5S	x			x		x		x		x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	
LW6D	x			x		x	x <sup>b</sup>	x	x	x	x	x	x <sup>b</sup>	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	x <sup>b</sup>	

(a) Collection of soil samples for chemical analysis will be sequenced. Phase I RI soil stockpile samples and immunoassay field screening results for the Phase II RI biased soil samples will be used to determine the list of chemical parameters for the remaining Phase II soil and groundwater samples.

(b) Grain size and total organic carbon analyses will be conducted on saturated zone samples only.

(c) K<sub>v</sub> = vertical hydraulic conductivity.

(d) Samples with the two highest concentrations of PCP, TPH, and PCBs, using the immunoassay technique will be sent to the laboratory for semivolatiles, volatiles, chlorinated phenols, TPH, priority pollutant (PP) metals, and PCBs. A minimum of 2, and up to 5 percent of the samples (including the two highest concentration samples) will be sent to the laboratory for confirmation analyses and will include samples having nondetect to medium range immunoassay concentrations.

(e) Performance of analysis contingent on results from Phase I RI soil samples and Phase II RI biased soil samples (see note (a)).

(f) The locations for any additional dioxin/uranium analysis will be determined based on field observations and the field screening results for PCP.

(g) The containing unit may not be present at this location.

TOLS005271

ATTACHMENT 4

## **Well M Groundwater Testing Results**

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TOLS005272

BZTO104(e)042093

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman  
James E. Bruya, Ph.D.  
(206) 285-8282

3008-B 16th Avenue West  
Seattle, WA 98119  
FAX: (206) 283-5044

March 20, 1991

Fred Proby, Environmental Specialist  
Time Oil Company  
2737 West Commodore Way  
Seattle, WA 98199

Dear Mr. Proby:

Enclosed are the amended results of the analyses of the samples submitted on March 4, 1991 from Project 03-123 N.W. Terminal, P.O. #17241.

We apologize for any inconvenience that this may have caused you. If you have any questions regarding this material, or if you just want to discuss any aspect of your projects, please do not hesitate to contact me.

Sincerely,

*Elaine Zamora*

Elaine K. Zamora, Chemist

EKZ

Enclosures

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TOLS005273

= / "

BZTO104(e)042094

## FRIEDMAN &amp; BRUYA, INC

## ENVIRONMENTAL CHEMISTS

AMENDED 3/19/91

Date of Report: March 13, 1991  
 Date Submitted: March 4, 1991  
 Project: 03-123 N.W. Terminal, P.O. #17241

RESULTS OF ANALYSES OF THE WATER SAMPLES  
 FOR BENZENE, TOLUENE, ETHYLBENZENE AND XYLEMES  
 AND GASOLINE  
 USING EPA METHODS 5030 COUPLED TO 8020 and 8015  
 Results Reported as mg/kg (ppm) mg/L?

<u>Sample #</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Eti-Benzene</u>	<u>Xylenes</u>	<u>Gasoline</u>
3123-0227-MW-K	0.004	0.013	0.004	0.017	1
3123-0227-MW-I	<0.001	<0.001	<0.001	0.002	1
3123-0227-MW-H	<0.001	<0.001	<0.001	<0.002	<1
3123-0228-MW-L	<0.001	<0.001	<0.001	<0.002	<1
3123-0228-MW-J1	0.100	0.004	0.026	0.041	1
3123-0228-MW-J2	<0.001	<0.001	<0.001	<0.002	<1
3123-0228-MW-J3	<0.001	<0.001	<0.001	<0.002	<1
3123-0228-MW-B1	0.12	0.011	0.005	0.016	1
3123-0228-MW-B2	<0.001	<0.001	<0.001	0.011	<1
3123-0228-MW-M	0.64	1.6	1.2	3.0	18
3123-0227-MW-G	0.55	0.16	0.13	1.8	16

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TOLS005274

## FRIEDMAN &amp; BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

AMENDED 3/19/91

Date of Report: March 13, 1991  
 Date Submitted: March 4, 1991  
 Project: 03-123 N.W. Terminal, P.O. #17241

RESULTS OF ANALYSES OF THE WATER SAMPLES  
 FOR BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES  
 AND GASOLINE  
 USING EPA METHODS 5030 COUPLED TO 8020 and 8015  
 Results Reported as mg/kg (ppm)

Quality Assurance

<u>Sample #</u>	<u>Benzene</u>	<u>Toluene</u>	<u>Eti-Benzene</u>	<u>Xylenes</u>	<u>Gasoline</u>
Method Blank	0.014 <sup>a</sup>	0.020 <sup>a</sup>	0.037 <sup>a</sup>	0.094 <sup>a</sup>	<1
3123-0227-MW-G (Duplicate)	0.21	0.038	0.021	0.620	10
3123-0227-MW-G (Matrix Spike) Spiked @ 0.020 ppm	b	b	b	b	
Percent Recovery					
3123-0227-MW-G (Matrix Spike Duplicate) Spiked @ 0.020 ppm	b	b	b	b	
Percent Recovery					
3123-0227-MW-G (Matrix Spike) Spiked @ 45 ppm					
Percent Recovery					73%
3123-0227-MW-G (Matrix Spike Duplicate) Spiked @ 45 ppm					
Percent Recovery					85%

<sup>a</sup> - The contamination seen is the result of carry-over of contamination from the previous sample. No contamination was seen in the blank samples analyzed prior to nor subsequent to this sample. The remaining samples were examined and none of the contamination seen appeared to be the result of carry-over between samples. As a result, none of the data are flagged.

<sup>b</sup> - The amount spiked was insufficient to give meaningful recovery data.

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TOLS005275

## FRIEDMAN &amp; BRUYA, INC

## ENVIRONMENTAL CHEMISTS

Date of Report: March 13, 1991  
Date Submitted: March 4, 1991  
Project: 03-123 N.W. Terminal, P.O. #17241

RESULTS OF ANALYSES OF THE WATER SAMPLES  
FOR ETHANOL BY GC/FID (MODIFIED 8015)  
Results Reported as mg/L (ppm)

<u>Sample #</u>	<u>Ethanol</u> (ppm)
3123-0227-MW-K	<4
3123-0227-MW-I	<4
3123-0228-MW-M	4,500
3123-0227-MW-G	<4

Quality Assurance

Method Blank	<4
3123-0227-MW-G (Duplicate)	<4
3123-0227-MW-G (Matrix Spike) Spiked @ 4,000 ppm Percent Recovery	101%
3123-0227-MW-G (Matrix Spike Duplicate) Spiked @ 4,000 ppm Percent Recovery	102%

TOLS005276

BZTO104(e)042097

## FRIEDMAN &amp; BRUYA, IN

## ENVIRONMENTAL CHEMISTS

AMENDED 3/19/91

Date of Report: March 13, 1991  
Date Submitted: March 4, 1991  
Project: 03-123 N.W. Terminal, P.O. #17241

RESULTS OF ANALYSES OF THE WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS KB3 & B11  
BY GC/FID (MODIFIED 8015)  
Results Reported as mg/L (ppm)

<u>Sample #</u>	<u>KB3 &amp; B11</u> (ppm)
3123-0227-MW-K	<2
3123-0227-MW-I	<2
3123-0227-MW-H	<2
3123-0228-MW-L	<2
3123-0228-MW-J1	<2
3123-0228-MW-J2	<2
3123-0228-MW-J3	<2
3123-0228-MW-B1	<2
3123-0228-MW-B2	<2
3123-0228-MW-M	56 <sup>a</sup>
3123-0227-MW-G	4

<sup>a</sup> - Pattern seen is not indicative of KB3 and B11.  
Contamination present may be the result of degradation  
of these materials or other material including biogenic  
compounds.

TOLS005277

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BZTO104(e)042098

## FRIEDMAN &amp; BRUYA, INC

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ENVIRONMENTAL CHEMISTS

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Date of Report: March 13, 1991  
Date Submitted: March 4, 1991  
Project: 03-123 N.W. Terminal, P.O. #17241

RESULTS OF ANALYSES OF THE WATER SAMPLES  
FOR TOTAL PETROLEUM HYDROCARBONS AS KB3 & B11  
BY GC/FID (MODIFIED 8015)  
Results Reported as mg/L (ppm)

Quality Assurance

<u>Sample #</u>	<u>KB3 &amp; B11</u> (ppm)
Method Blank	<2
3123-0228-MW-M (Duplicate)	40 <sup>a</sup>
3123-0228-MW-M (Matrix Spike) Spiked @ 5 ppm Percent Recovery	c
3123-0228-MW-M (Matrix Spike Duplicate) Spiked @ 5 ppm Percent Recovery	c

<sup>a</sup> - Pattern does not indicate KB3 & B11

<sup>b</sup> - Pattern indicates KB3 & B11

<sup>c</sup> - The amount spiked was insufficient to give meaningful recovery data.

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TOLS005278

## FRIEDMAN &amp; BRUYA, INC

## ENVIRONMENTAL CHEMISTS

Date of Report: March 13, 1991  
Date Submitted: March 4, 1991  
Project: 03-123 N.W. Terminal, P.O. #17241

RESULTS OF ANALYSES OF THE WATER SAMPLES  
FOR PCP (PENTA)  
Results Reported as mg/L (ppm)

<u>Sample #</u>	<u>PCP (PENTA)</u> (ppm)
3123-0227-MW-K	<1
3123-0227-MW-I	<1
3123-0227-MW-H	<1
3123-0228-MW-L	<1
3123-0228-MW-J1	60
3123-0228-MW-J2	1
3123-0228-MW-J3	<1
3123-0228-MW-B1	<1
3123-0228-MW-B2	1
3123-0228-MW-M	4
3123-0227-MW-G	1

Quality Assurance

Method Blank	<1
3123-0228-MW-M (Duplicate)	1
3123-0228-MW-M (Matrix Spike) Spiked @ 5 ppm Percent Recovery	135%
3123-0228-MW-M (Matrix Spike Duplicate) Spiked @ 5 ppm Percent Recovery	210%

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TOLS005279

BZTO104(e)042100

# TIME OIL CO. SAMPLE LOG

WEST TERMINAL  
Attn: RUSSELL - KENNETH M. HULL/HYDRO

Prop. No: 07123

Address:

1200 S.W. Burdell  
Portland OR

me: Fraxum & Blaya

Date: 2-25-91

Method: Grab

S.Spoon

Bailer

Pump

Preserved: Ice

Acid

None

Address: 300 1/2 E. 16th West.

Phone:

PO No.: 17241

FBI#

Sample #	Location/Description	Type*	Analysis Instructions	EPA Method
3123-027-MW-K	18253-59 MW-K	S(W)P	Ethanol, Penta, "Solvents", TPH-G+BTEX	DPM
3123-027-MW-I	18260-1a I-W-I	S(W)P	Ethanol, Penta, Solvents, TPHG+BTEX	
3123-027-MW-H	18267-73 MW-H	S(W)P	Penta, Solvents, TPHG+BTEX	
3123-028-MW-L	18274-80 MW-L	S(W)P	Penta, Solvents, TPHG+BTEX	
3123-028-IHW-J1	18281-87 MW-J1	S(W)P	Penta, Solvents, TPHG+BTEX	
3123-028-MW-J2	18288-94 MW-J2	S(W)P	" " "	
3123-028-MW-J3	18295-18301 MW-J3	S(W)P	" " "	
3123-028-MW-B1	18302-DB MW-B1	S(W)P	" " "	
3123-028-MW-B2	18309-15 MW-B2	S(W)P	SO15" PLP "RW15D "	
3123-028-MW-M	18316-22 MW-M	S(W)P	Ethanol, Penta, Solvents, TPHG+BTEX	
3123-028-MW-L	18323-29 MW-L	S(W)P	" " " " "	
3123-027-Lth Vpp	18330 1/4 liter Sample	S(W)P	Ethanol, TPH, BTEX	BD15, BD15M
-		S(W)P		
-		S(W)P	18313 > confirmed in analysis	
-		S(W)P	18314 >	
-		S(W)P		
-		S(W)P		

Other Instructions: Monitoring well water samples - All have 3-1 liter samples and 4-40ml VOA's. \* "Solvents" include KBB & BII (Kodak)

Sample Count = 33 liter Check sample jar count against Log!

\* S = Soil W = Water P = Product

44-VOA

1-SSV

## CHAIN OF CUSTODY RECORD

Relinquished By:

Received By:

Date & Time

Relinquished By:

Received For Lab By:

Date & Time: 3-4-91

## GENERAL LAB INSTRUCTIONS

TOLS005280

Please provide the requested information

1. Sample numbers assigned by Lab: 18253 to 18330 Date Analyzed: 3-6-91 & 3-7-91
2. Person performing analysis: Elaine K. Zamora Data Reviewer: Lisa A. Bentley
3. Scheduled sample disposal date: April 4, 1991 NOTIFY TIME OIL CO. BEFORE DISPOSAL
4. Provide copies of ALL chromatograms, including QA/QC runs.

IMPORTANT! PLEASE RETURN A COPY OF THIS FORM WITH YOUR REPORT TO TIME OIL CO.

Attn: Environmental Manager, PO Box 24447 Terminal Sta., Seattle, WA 98124 (206) 285-2400

\$1000

BZTO104(e)042101

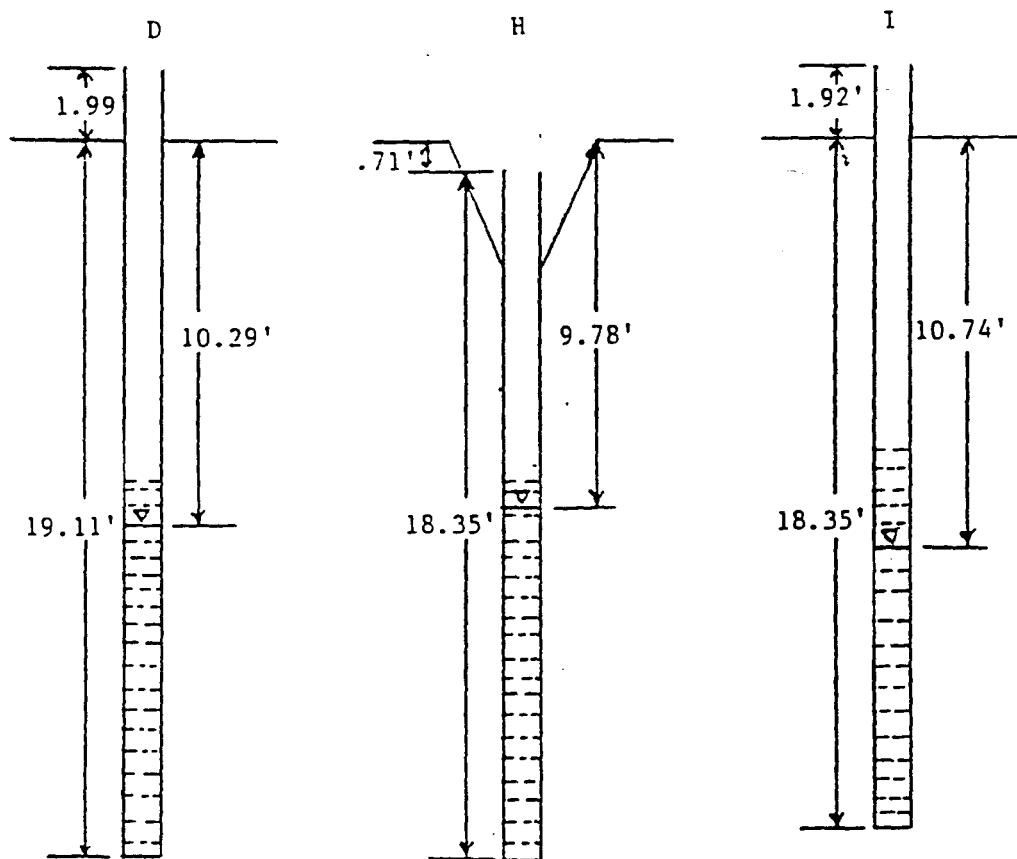
ATTACHMENT 5

## Well D Construction Detail

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TOLS005281

WELL CONSTRUCTION DETAILS



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TOLS005282

BZTO104(e)042103

ATTACHMENT 6

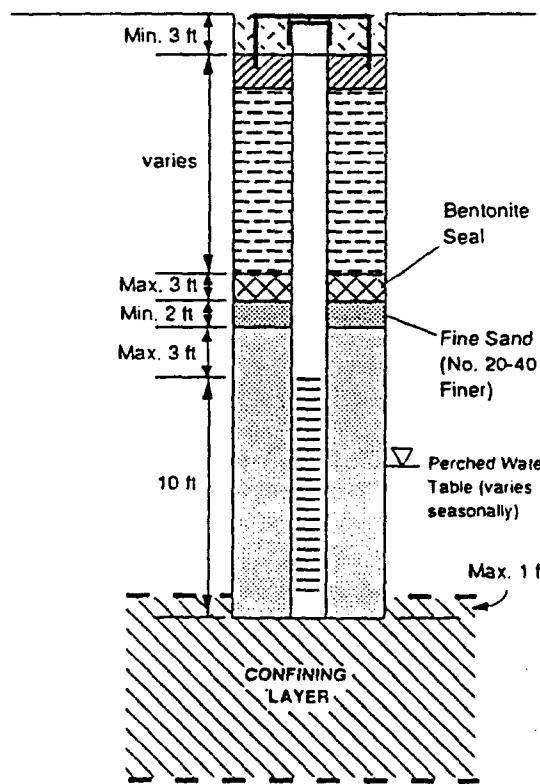
## **Revised Figure A-5**

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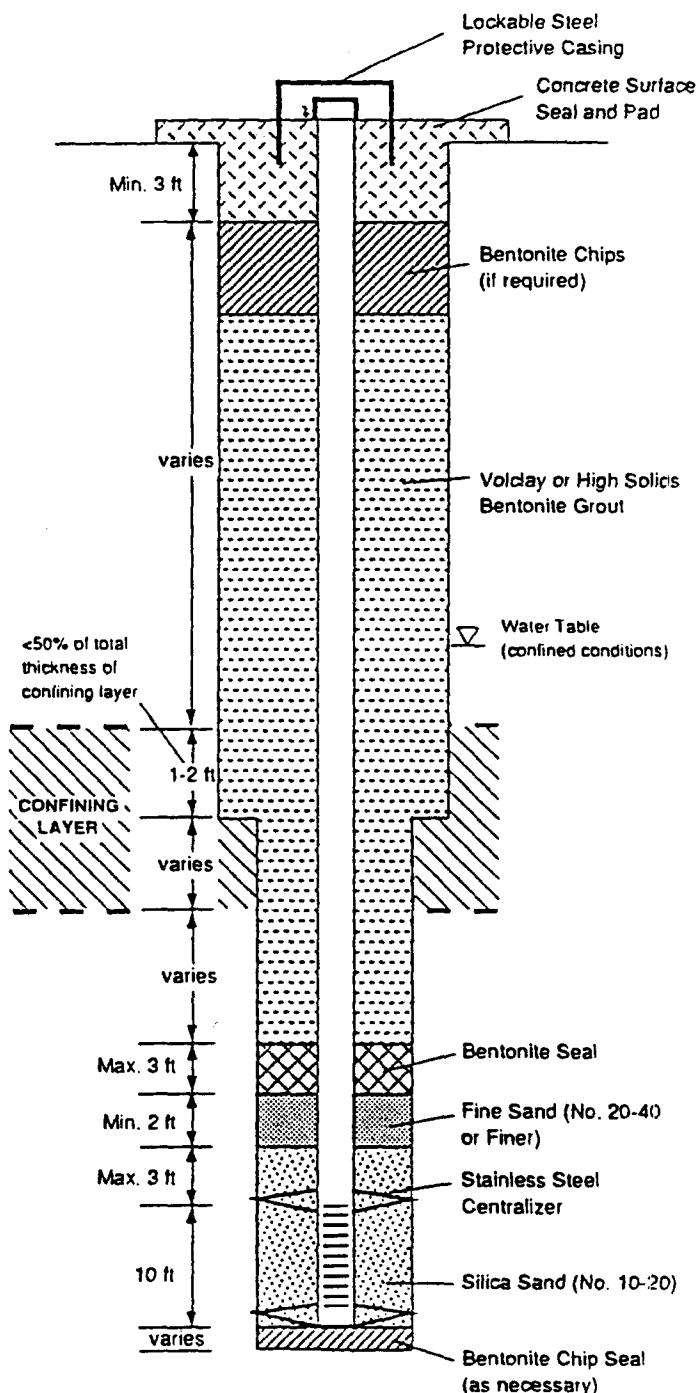
TOLS005283

BZTO104(e)042104

**Shallow Monitoring Well with Flush-Mounted Monument<sup>(1)</sup>**



**Deep Monitoring Well with Aboveground Monument<sup>(1)</sup>**



Both wells will include:

- 2-inch PVC Blank (Schedule 40)
- 2-inch PVC Screen (0.20-inch slotted)
- PVC End Caps



ATTACHMENT 7

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**Revised Table 4-4**  
**Revised Table A-3**

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TOLS005285

BZTO104(e)042106

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TABLE 4-4  
GROUNDWATER ANALYSIS PROGRAM  
TIME OIL CO. PHASE II REMEDIAL INVESTIGATION  
PORTLAND, OREGON

Monitoring Location	Shallow Well	Shallow Well Point	Deep Well	Initial Screening PCP and TPH	Quarterly Chemical Analyses <sup>(a)</sup>						
					Semivolatiles	Volatiles	Chlorinated Phenols	TPH-D	Dioxin/ Furan <sup>(b)</sup>	Priority Pollutant Metals	Major Ions
1 <sup>(c)</sup>	✓	-	-	-	-	-	-	-	-	-	-
2	✓	-	-	✓	-	-	-	-	-	-	-
3	✓	-	-	-	-	-	-	-	-	-	-
A	-	✓	-	-	-	-	-	-	-	-	-
B	-	✓	-	-	-	-	-	-	-	-	-
B1	✓	-	-	-	✓	✓	✓	✓	-	✓	✓
B2	-	-	✓	-	✓	✓	✓	✓	-	✓	✓
C	-	✓	-	-	-	-	-	-	-	-	-
D	✓	-	-	-	✓ <sup>(d)</sup>	✓	✓	✓	✓	✓	✓
E <sup>(e)</sup>	-	✓	-	-	-	-	-	-	-	-	-
G	-	✓	-	-	-	-	-	-	-	-	-
G1A	✓	-	-	-	✓	✓	✓	✓	✓	✓	✓
H	✓	✓	-	-	✓	✓	✓	✓	✓	✓	✓
I <sup>(f)</sup>	✓	✓	✓	-	-	-	-	-	-	-	-
J1	✓	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
J2	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
J3	-	✓	✓	-	✓	✓	✓	✓	✓	✓	✓
K	✓	✓	✓	-	-	-	-	-	-	-	-
L	✓	✓	✓	-	-	-	-	-	-	-	-
M	✓	✓	✓	-	-	-	-	-	-	-	-
N	✓	✓	✓	-	-	-	-	-	-	-	-
O	-	✓	✓	-	-	-	-	-	-	-	-
P	✓	✓	✓	-	-	-	-	-	-	-	-
Q	✓	✓	✓	-	-	-	-	-	-	-	-
R	-	✓	✓	-	-	-	-	-	-	-	-
LW1S	✓	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW1D	-	-	✓	-	✓	✓	✓	✓	✓	✓	✓
LW2S	✓	-	-	-	✓	✓	✓	✓	✓	✓	-
LW3D	-	-	✓	-	✓	✓	✓	✓	✓	✓	✓
LW4S	✓	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW4D	-	-	✓	-	✓	✓	✓	✓	✓	✓	✓
LW5S	✓	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW6D	-	-	✓	-	✓	✓	✓	✓	✓	✓	✓

(a) The list of constituents may be modified based on Phase I RI soil stockpile results and Phase II RI biased soil results; groundwater samples from any wells at which PCBs are detected in soil also will be analyzed for PCBs.

(b) The well locations for any additional dioxin/furan analyses will be determined following the first groundwater sampling event.

(c) Scheduled to be abandoned.

(d) Initial screening at this location also will include PCB screening analysis.

TOLS005286

TABLE A-3  
GROUNDWATER ANALYSIS PROGRAM  
TIME OIL CO. PHASE II REMEDIAL INVESTIGATION  
PORTLAND, OREGON

Monitoring Location	Shallow Well	Shallow Well Point	Deep Well	Initial Screening	Quarterly Chemical Analyses <sup>(a)</sup>							
					PCP and TPH	Semivolatiles	Volatiles	Chlorinated Phenols	TPH-D	Dioxin/ Furan <sup>(b)</sup>	Priority Pollutant Metals	Major Ions
1 <sup>(c)</sup>	✓	-	-	-	-	-	-	-	-	-	-	-
2	✓	-	-	✓	-	-	-	-	-	-	-	-
3	✓	-	-	-	-	-	-	-	-	-	-	-
A	-	-	-	-	-	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-	-	-	-	-
B1	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
B2	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
C	-	-	-	-	-	-	-	-	-	-	-	-
D	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
E <sup>(d)</sup>	-	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-	-
G1A	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
H	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
I <sup>(e)</sup>	✓	-	-	-	-	-	-	-	-	-	-	-
J1	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
J2	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
J3	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
K	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
L	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
M	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
N	-	-	-	-	-	-	-	-	-	-	-	-
O	-	-	-	-	-	-	-	-	-	-	-	-
P	-	-	-	-	-	-	-	-	-	-	-	-
Q	-	-	-	-	-	-	-	-	-	-	-	-
R	-	-	-	-	-	-	-	-	-	-	-	-
LW1S	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW1D	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW2S	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	-
LW3D	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW4S	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW4D	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW5S	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
LW6D	-	-	-	-	-	✓	✓	✓	✓	✓	✓	✓

- (a) The list of constituents may be modified based on Phase I RI soil stockpile results and Phase II RI biased soil results; groundwater samples from any wells at which PCBs are detected in soil also will be analyzed for PCBs.
- (b) The well locations for any additional dioxin/furan analyses will be determined following the first groundwater sampling event.
- (c) Scheduled to be abandoned.
- (d) Initial screening at this location also will include PCB screening analysis.

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ATTACHMENT 8

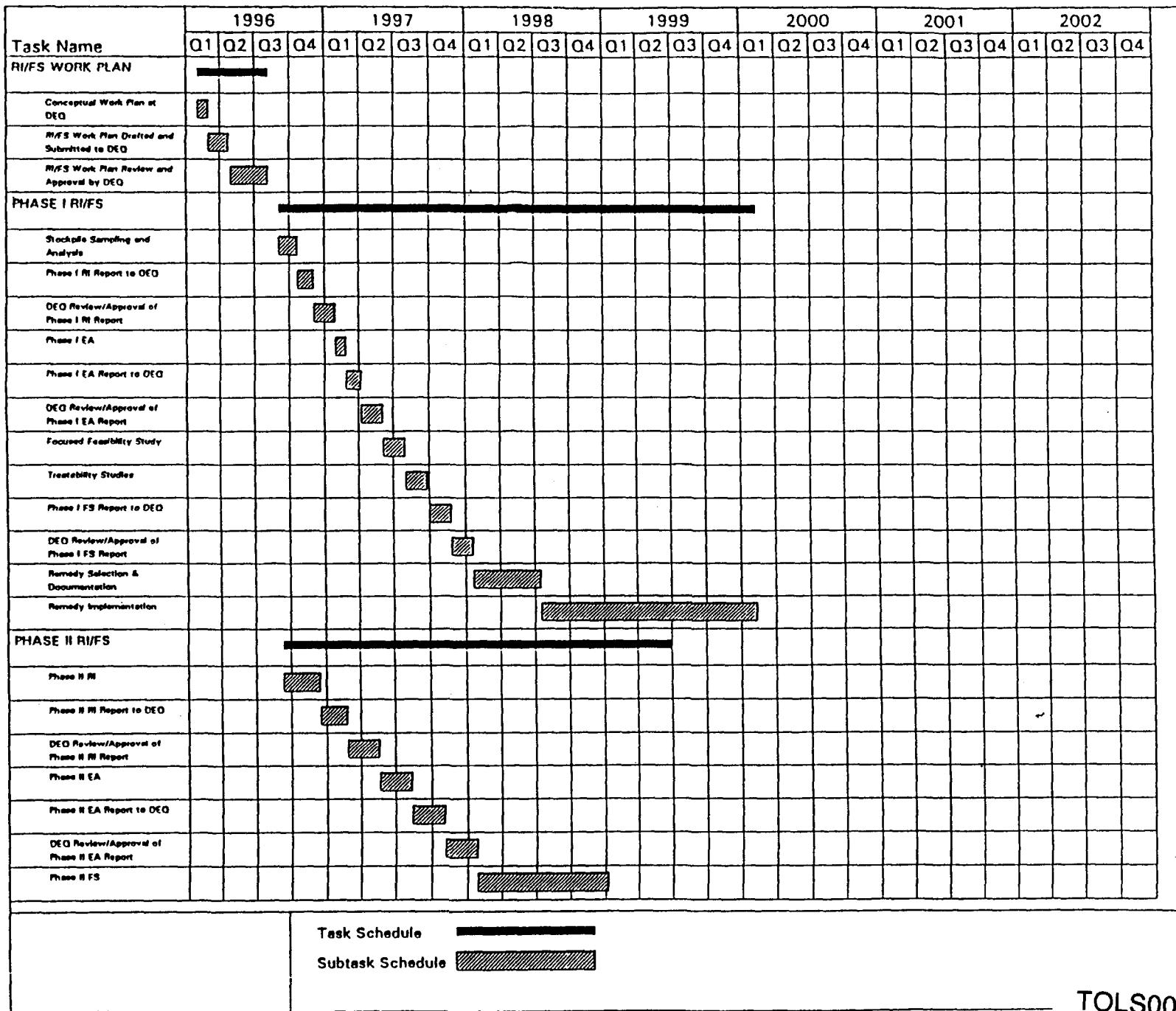
## **Revised Figure 8-1**

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ATTACHMENT 9

## **Revised Tables B-3, B-4, B-5, and B-6**

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TABLE B-3  
MATRIX SPIKE RECOVERY CONTROL LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

Analysis (Method)	Matrix Spike Compound	Recovery Control Limits (%) <sup>(a)</sup>		RPD (%) <sup>(b)(c)</sup>	
		Water	Soil	Water	Soil
<b>Chlorinated phenols (modified 8040)</b>					
	Pentachlorophenol	45-130	45-130	35	35
<b>Volatiles (8260)</b>					
	1,1-Dichloroethene	65-151	46-160	30	30
	Trichloroethene	77-143	49-160	30	30
	Chlorobenzene	87-141	87-143	30	30
	Toluene	87-138	66-160	30	30
	Benzene	79-141	83-158	30	30
<b>Semivolatiles (8270)</b>					
	1,2,4-Trichlorobenzene	47-105	34-110	30	30
	Acenaphthene	39-128	41-119	30	30
	2,4-Dinitrotoluene	24-134	40-152	30	30
	Pyrene	26-150	10-162	30	30
	N-Nitroso-di-n-propylamine	39-121	38-122	30	30
	1,4-Dichlorobenzene	41-106	33-103	30	30
	Pentachlorophenol	10-138	10-125	30	30
	Phenol	10-126	18-150	30	30
	2-Chlorophenol	10-141	21-124	30	30
	4-Chloro-3-Methylphenol	10-165	37-141	30	30
	4-Nitrophenol	24-134	12-206	30	30
<b>PAH (by SIM)</b>					
	Phenanthrene	30-150	30-150	30	30
	Chrysene	30-150	30-150	30	30
	Benzo(k)fluoranthene	30-150	30-150	30	30
<b>Polychlorinated biphenyls (8081)</b>					
	Aroclor 1242	30-160	30-133	30	30
<b>Metals (6010/7000) and major ions<sup>(d)</sup></b>					
		75-125	75-125	20	20
<b>Dioxins and furans (8290)</b>					
	All tetra-, penta-, and hexa-cargeners	40-135	40-135	20	20
	All hepta- and octa-cargeners	25-135	25-135	20	20
<b>Total petroleum hydrocarbons (TPH-HCID, TPH D)</b>					
	Diesel	38-160	36-157	30	30

- (a) Control limits are based on current ARI laboratory data or the EPA method. Control limits may be modified during the RI/FS process as the limits are refined. Instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired control limits and associated QC criteria.
- (b) RPD = relative percent difference.
- (c) If sample value is within 5 times the quantitation limit (QL), control limits will be +/- QL for water or +/- 2QL for soil.
- (d) Refers to laboratory duplicate results.

TABLE B-4  
SURROGATE RECOVERY CONTROL LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

Analysis (Method)	Surrogate Compound	Recovery Control Limits (%) <sup>(a)</sup>	
		Water	Soil
<b>Volatiles (8260)</b>			
	d8-Toluene	87-115	84-116
	Bromo fluoro benzene	86-113	73-118
	d4-1,2-Dichloroethane	77-123	82-131
	d4-1,2-Dichlorobenzene	90-113	85-115
<b>Semivolatiles (8270)</b>			
	d5-Nitrobenzene	30-113	27-109
	2-Fluorobiphenyl	20-129	47-108
	d14-p-Terphenyl	30-134	43-122
	d5-Phenol	10-101	31-102
	2-Fluorophenol	10-111	47-108
	2,4,6-Tribromophenol	10-134	28-117
	d4-2-Chlorophenol	10-129	33-104
	d4-1,2-Dichlorobenzene	35-100	31-103
<b>PAH (by SIM)</b>			
	d14-dibenz(a,h,)anthracene	10-137	24-180
	d10-methylnaphthalene	29-110	20-149
<b>Chlorinated phenols (modified 8040)</b>			
	Bromodichlorophenol	30-160	30-160
<b>Polychlorinated biphenyls (8081)</b>			
	TCMX	30-103	33-134
	DCBP	30-128	43-155
<b>Total petroleum hydrocarbons (OTPH-HCID AND OTPH-D)</b>			
	Methyl arachidate	32-157	33-160

- (a) Control limits are based on current ARI laboratory data or the EPA method. Control limits may be modified during the RI process as the limits are refined. Instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired control limits and associated QC criteria

TABLE B-5

QUANTITATION LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

Analysis	Analyte	Quantitation Limits <sup>(a)</sup>		
		Water ( $\mu\text{g/L}$ )	Soil (mg/kg)	
<b>Standard Laboratory Methods:</b>				
<b>Volatiles</b>				
Benzene		1.0	0.001	
Toluene		1.0	0.001	
Ethylbenzene		1.0	0.001	
Xylenes (total)		1.0	0.002	
All others		1.0-10	0.001-0.007	
<b>Semivolatile organics</b>				
2-Chlorophenol		1.0	0.130	
2,4-Dichlorophenol		3.0	0.220	
2,4,6-Trichlorophenol		5.0	0.330	
2,4,5-Trichlorophenol		5.0	0.330	
Pentachlorophenol		1.0	0.330	
Benzo(a)anthracene		1.0 (0.1) <sup>(b)</sup>	0.067	
Chrysene		1.0 (0.1) <sup>(b)</sup>	0.067 (0.0033) <sup>(b)</sup>	
Benzo(b)fluoranthene		1.0 (0.1) <sup>(b)</sup>	0.200 (0.0033) <sup>(b)</sup>	
Benzo(k)fluoranthene		1.0 (0.1) <sup>(b)</sup>	0.130 (0.0033) <sup>(b)</sup>	
Benzo(a)pyrene		1.0 (0.1) <sup>(b)</sup>	0.130 (0.0033) <sup>(b)</sup>	
Indeno(1,2,3-cd)pyrene		1.0 (0.1) <sup>(b)</sup>	0.200 (0.0033) <sup>(b)</sup>	
Dibenz(a,h)anthracene		1.0 (0.1) <sup>(b)</sup>	0.200 (0.0033) <sup>(b)</sup>	
All others		1.0-10 (0.1-0.2) <sup>(b)</sup>	0.041-0.670 (0.0033) <sup>(b)</sup>	
<b>Chlorinated phenols</b>				
2,4,6-Trichlorophenol		0.25	0.01	
2,3,6-Trichlorophenol		0.25	0.01	
2,4,5-Trichlorophenol		0.25	0.01	
2,3,4-Trichlorophenol		0.25	0.01	
2,3,5,6-Tetrachlorophenol		0.25	0.01	
2,3,4,5-Tetrachlorophenol		0.25	0.01	
Pentachlorophenol		0.25	0.01	
Priority pollutant metals		0.2-10	0.02-1.0	
Polychlorinated biphenyls		1-2	0.033-0.067	

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TABLE B-5

**QUANTITATION LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON**

Analysis	Analyte	Quantitation Limits <sup>(a)</sup>	
		Water ( $\mu\text{g/L}$ )	Soil (mg/kg)
Dioxins and furans			
All Tetra-congeners		1e-05 <sup>(c)</sup>	1e-03 <sup>(c)</sup>
All Penta-congeners		5e-05 <sup>(c)</sup>	5e-03 <sup>(c)</sup>
All Hexa-congeners		5e-05 <sup>(c)</sup>	5e-03 <sup>(c)</sup>
All Hepta-congeners		5e-05 <sup>(c)</sup>	5e-03 <sup>(c)</sup>
All Octa-congeners		1e-04 <sup>(c)</sup>	1e-02 <sup>(c)</sup>
Total petroleum hydrocarbons		100-250	10-50
Total organic carbon		--	1
Immunoassay field screening methods			
Pentachlorophenol		5	0.5
Total petroleum hydrocarbons			
Diesel		245	15
Gasoline		165	10
Polychlorinated biphenyls		--	0.4-2

- (a) Quantitation limits are based on current laboratory data and may be modified during the RI process as methodology is refined. Quantitation limits listed for soil are based on wet weight. The quantitation limits calculated by the laboratory for soil, calculated on dry weight basis, will be higher. Laboratory quantitation limits will be based on the lowest standard on the calibration curve. Instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired quantitation limits and associated QC criteria.
- (b) PAH quantitation limits for Method 8270 using selective ion monitoring (SIM) shown in parentheses.
- (c) Laboratory target detection limit, which is generally achievable but may be influenced by instrument sensitivity, recovery, and matrix interferences.

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TABLE B-6

**RI ANALYTICAL METHODS<sup>(a)</sup>**  
**TIME OIL CO. NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Sample Type	Extraction/Cleanup	Analytical Method
<b>Standard Laboratory Methods:</b>		
Soil		
Chlorinated phenols or pentachlorophenol	3550 (sonication)	8040 (modified)
Volatile organics <sup>(b)</sup>	None	8260
Semivolatile organics <sup>(b)</sup>	3550 (sonication)	8270 (PAH by SIM)
Dioxins/furans <sup>(c)</sup>	per 8290 methodology	8290
Total petroleum hydrocarbons	None	OTPH-HCID and/or OTPH-D <sup>(d)</sup>
Polychlorinated biphenyls	3550 (sonication)	8081
Priority pollutant metals <sup>(e)</sup>	3050 (acid digestion)	6010/7000
Total organic carbon	Drying, purging <sup>(f)</sup>	Combustion/infrared <sup>(g)</sup>
Grain size	None	ASTM D 422 <sup>(h)</sup>
Vertical conductivity	None	ASTM D 5084 <sup>(i)</sup>
Percent moisture/solids	None	ASTM D 2216 <sup>(j)</sup>
Groundwater		
Chlorinated phenols or pentachlorophenol	3510 (separatory funnel)	8040 (modified)
Volatile organics <sup>(b)</sup>	None	8260
Semivolatile organics <sup>(b)</sup>	3510 (separatory funnel)	8270 (PAH by SIM)
Polychlorinated biphenyls	3510 (sonication)	8081
Priority pollutant metals <sup>(e)</sup>	3020 (acid digestion)	6010/7000
Dioxins/furans <sup>(c)</sup>	per 8290 methodology	8290
Total petroleum hydrocarbons	None	OTPH-HCID and/or OTPH-D <sup>(d)</sup>
Major ions <sup>(g)</sup>	None	Cations by ICP (6010) Anions by standard EPA methods

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TABLE B-6

**RI ANALYTICAL METHODS<sup>(a)</sup>**  
**TIME OIL CO. NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Sample Type	Extraction/Cleanup	Analytical Method
Dust		
Pentachlorophenol	3550 (sonication)	8040 (modified)
<b>Immunoassay field screening methods</b>		
Soil and water		
Pentachlorophenol		4010
Total petroleum hydrocarbons		4030 (draft; June 1992)
Polychlorinated biphenyls		4020 (draft; October 1992)
(a) Methods are from SW-846 (EPA 1986, updated 1995) unless otherwise referenced. (b) Laboratory will be required to report first 10 tentatively identified compounds (TICs) to aid in the identification of carrier and additive chemicals. (c) Dioxin/furan results will be converted to an equivalent 2,3,7,8-TCDD toxicity by multiplying concentrations by the toxicity equivalence factors (TEFs; Table B-7). (d) Source: DEQ 1990b. (e) Includes antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc. (f) Source: ASA 1982. (g) Includes calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, carbonate, and bicarbonate. (h) Source: ASTM 1994a. (i) Source: ASTM 1994b. (j) Source: ASTM 1994c.		

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## Work Plan

### **Phases I and II Remedial Investigation/Feasibility Study Time Oil Co. Northwest Terminal**

May 10, 1996

Prepared for

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## 1.0 INTRODUCTION

This work plan presents the general description, objectives, and scope of work for Phases I and II of a remedial investigation/feasibility study (RI/FS) at the Time Oil Co. Northwest Terminal in Portland, Oregon (the facility). The RI/FS will be implemented in accordance with the Oregon Administrative Rules (OAR 340-122) under the direction of the Oregon Department of Environmental Quality (DEQ) and under the provisions of a voluntary cleanup program (VCP) agreement currently under negotiation between Time Oil Co. and DEQ.

### 1.1 RI/FS GOALS AND OBJECTIVES

The overall goal of the RI/FS is to collect data sufficient to characterize the nature and extent of contamination at the facility and to determine appropriate exposure scenarios for an endangerment assessment (EA) so that appropriate remedial action alternatives that are protective of human health and the environment can be identified and evaluated. Specific objectives of the RI/FS, as summarized from the VCP agreement, include:

- Evaluate the full nature and extent of pentachlorophenol releases associated with the former PCP-product mixing area
- Develop and implement treatment and disposal options for soil contaminated with pentachlorophenol which has been stockpiled at the site
- Evaluate the full nature and extent and identify remedial options for hazardous substance releases associated with petroleum product handling and storage areas, including former waste oil aboveground storage tanks.

To meet these objectives, the RI/FS has been designed to provide the technical basis for generating information needed to:

- Evaluate the distribution of hazardous substance concentrations
- Evaluate the direction and rate of migration of hazardous substances
- Evaluate the environmental impact and risk to human health and/or the environment
- Develop the information necessary to select a remedial action.

## 1.2 SCOPE OF THE INVESTIGATION

The RI/FS for the Time Oil Northwest Terminal will proceed using a phased approach. The purpose of phasing is to provide a mechanism for early data evaluation for use in focusing the scopes of future phases and to allow for expedited selection and implementation of appropriate remedial actions. Three phases have been identified for RI/FS activities:

- Phase I will address soil that was excavated in 1989 from the former pentachlorophenol (PCP) mixing area and that currently is stockpiled on a liner and under a cover just to the southwest of the former PCP mixing area. The Phase I RI will include a stockpile sampling event, followed by a focused EA and a focused FS. If it is determined that onsite treatment and disposal of the stockpiled soil is an appropriate option for remediation, final selection of the remedial alternative may be delayed until the applicable information from other phases of the RI are collected and evaluated.
- Phase II will address any remaining *in situ* soil and groundwater contamination associated with the former PCP mixing area and the former Crosby & Overton tank area with an RI, an EA, and FS.
- Phase III will address the extent of any soil and groundwater contamination associated with other historical operations of the Northwest Terminal (e.g., tank farms and loading area). If determined necessary based on the Phase II investigation results, Phase III also will evaluate the potential for impacts from contamination from the former PCP mixing area on surface water and sediments in the Willamette River.

This work plan provides the scope of work for phases I and II of the RI/FS, including EAs. Based on review of results from each phase of the RI, if Time Oil and DEQ determine that additional work is needed to characterize the nature and extent of contamination at the facility, this RI/FS work plan may be supplemented by additional project-specific planning material or may be amended or revised, as appropriate.

## 1.3 WORK PLAN ORGANIZATION

The remainder of this RI/FS work plan is organized into the following sections:

- **Section 2.0 Background Information.** This section provides a description of the facility and its history and outlines the regulatory framework to be used during the RI/FS process. This section also summarizes previous investigations conducted at the facility, potential constituents of concern, the current understanding of the geology and hydrogeology, and potential migration pathways for the facility.
- **Section 3.0 Current Data Gaps.** This section identifies existing data gaps that are the focus of the RI for Phases I and II.

- **Section 4.0 Remedial Investigation.** This section presents the work plan for the Phase I and II RI activities. Included are proposed field activities and data collection efforts for soil and groundwater investigations, quality assurance/quality control procedures, and data evaluation and management protocols.
- **Section 5.0 Endangerment Assessment.** This section presents the work plan for conducting a focused EA based on Phase I RI results, and an EA based on Phase II RI results. Included are proposed methods for conducting human health evaluations, including identification of constituents of concern for the facility, an exposure assessment, a toxicity assessment, and risk characterization, and the steps for conducting environmental evaluations for each phase.
- **Section 6.0 Feasibility Study.** This section presents the work plan for developing and evaluating appropriate remedial actions for areas of the facility addressed during the Phases I and II RIs. Included are the evaluations to be used to conduct each phase of the FS.
- **Section 7.0 RI/FS Reporting.** This section identifies how the RI/FS activities will be documented.
- **Section 8.0 RI/FS Schedule.** This section presents the schedule for RI/FS activities, including field programs, laboratory analysis, and reporting.
- **Section 9.0 Project Management.** This section identifies key personnel and the organization for the RI/FS project team.
- **Section 10.0 References.** This section lists references identified throughout this work plan.

The field sampling plan, quality assurance project plan, and the health and safety plan are included as appendices to this work plan.

## 2.0 BACKGROUND INFORMATION

This section provides background information that was used in the scoping and development of this RI/FS work plan and that will be used during the evaluation of the results from this investigation. This section provides a description of the facility and summarizes its history; outlines the regulatory framework for the RI/FS process; summarizes available information on the results of previous soil and groundwater investigations; and describes potential constituents of concern, the current understanding of the geology and hydrogeology, and potential migration pathways for the facility.

### 2.1 FACILITY DESCRIPTION

The Time Oil Northwest Terminal is an active bulk petroleum storage and transfer facility currently owned and operated by Time Oil Co. (Time Oil). The facility is located in the industrialized Rivergate area of north Portland, Oregon (Figure 2-1). The Northwest Terminal is bordered to the north, east, and south by heavy industrial complexes and the Port of Portland and to the west by the Willamette River. The facility encompasses 52 acres, and the average land surface elevation is about 28 ft above mean sea level (MSL). Within the facility, there are several areas that are distinguished by their current or historical uses (Figure 2-2). These areas include:

- Active Northwest Terminal tank farm areas where various petroleum products are stored. Bulk product terminal areas are located in the western and southern portions of the facility, adjacent to the Willamette River. Gasoline, diesel, ethanol, and other petroleum products are stored in 26 aboveground storage tanks in the west tank farm area and in ten aboveground storage tanks and one underground storage tank in the south tank farm area (formerly referred to as the Bell Terminal).
- Loading rack where petroleum products are transferred from the west tank farm area to trucks. The loading rack is located just west of the office.
- Butane and ethanol storage area and loading rack located to the southeast of the office area. This area includes two aboveground tanks for storage of ethanol (currently empty) and one aboveground tank for butane storage. There are no environmental investigations planned in this area.
- Petroleum transfer and receipt facilities, including above- and below-ground piping; product receipt facilities via rail, truck, and vessel; product distribution facilities via truck, marine vessels (a 380-ft dock in the Willamette River), and rail.

- Former pentachlorophenol mixing area where specialty wood treating products containing pentachlorophenol in various formulations were blended and stored for offsite shipment. The former pentachlorophenol (PCP) mixing area is located in the approximate center of the facility and includes the former PCP warehouse; the area south of the warehouse (formerly occupied by various mixing and storage tanks and currently empty); a stockpile of approximately 3,000 yd<sup>3</sup> of soil that was excavated from the area south of the warehouse in 1989 and placed on a liner, under a cover, and surrounded by a concrete wall or berm in an area adjacent to the southwest corner of the excavated area; and an inactive soil treatment area just south of the stockpile.
- Former Crosby & Overton tank area located directly south of the former PCP mixing area where waste oils were previously stored in two aboveground storage tanks. The tanks have since been removed from this area. Another aboveground tank (38009) located in this area was established in 1989 as a bioreactor during soil treatment activities for the soil stockpile but is currently unused.
- Entrance, main office, warehouses, and equipment maintenance area located in the northwestern portion of the facility.
- Inactive and currently undeveloped area located in the eastern portion of the facility.

## 2.2 FACILITY HISTORY

Since 1943, Time Oil has operated the Northwest Terminal petroleum products facility. Historically, the facility has been used for the receipt, storage, and distribution of petroleum and petroleum-related products. Also, Time Oil leased tank facilities to outside customers for storage of products and, in the case of the former PCP mixing area, for formulation of products. The following sections summarize the history of activities, including known releases, in the former PCP mixing area, the former Crosby & Overton area, and the tank farm areas. These areas are the focus of the investigations for the RI/FS. Previous investigations conducted in these areas are discussed in Section 2.4.

### 2.2.1 FORMER PCP MIXING AREA

From 1967 to 1982, PCP-containing products were formulated at the facility under an agreement with Koppers Company. Operations included import of solid PCP, various carrier liquids into which the PCP would be mixed, and various additives; interim storage of the chemicals in the former PCP warehouse and in product tanks located within the former PCP mixing area; transfer and mixture of the chemicals to formulations specified by Koppers Company; interim

storage of the PCP products; and transfer of the products to drums or containers for offsite transport. No PCP blending activities have occurred at the facility since 1982.

Releases of PCP, carriers, additives, and PCP formulations to soil in the PCP mixing area appear to have occurred during the mixing operations. Environmental investigations and remedial actions conducted by and for Time Oil since 1984 (see Section 2.4) resulted in the previously noted excavation of PCP-containing soil. The excavation area was filled and regraded and approximately 3,000 yd<sup>3</sup> of excavated soil remains stockpiled onsite. In addition, a limited but unquantified volume of PCP-containing soil remains unexcavated at the facility. The former PCP mixing area and warehouse and the approximate boundaries of the excavation are shown on Figure 2-3.

### 2.2.2 FORMER CROSBY & OVERTON TANK AREA

From 1975 to 1989, two tanks (5006 and 10002) were leased from Time Oil by Crosby & Overton, Inc. to store materials generated on jobs offsite. Crosby & Overton reportedly provided service to collect and store waste oils from separators, oil slop tanks, ship tank cleaning, and related tasks. As part of the conditions for termination of the lease agreement, Time Oil requested that Crosby & Overton clean the tanks and restore them to a condition suitable for use and storage of petroleum fuels. During cleaning of the tanks, the substance that was being stored overflowed onto the unpaved ground surface near the tanks. Laboratory analyses of the sludge from the tank and nearby soil indicated elevated concentrations of polychlorinated biphenyls (PCBs). In 1987, about 150 yd<sup>3</sup> of material in the smaller tank (5006) were removed and disposed of at the St. Johns Landfill as a nonhazardous waste, in accordance with a permit from Metro. In 1989, the large tank (10002) was emptied and cleaned; as with the smaller tank, the material was disposed of at St. Johns Landfill based on nondetected PCB results. Also in 1989, an investigation and remedial action conducted by Crosby & Overton at Time Oil's request resulted in the excavation of four drums (about 20 ft<sup>3</sup>) of PCB-contaminated soil from an area about 20 ft east of tank 10002. The tanks were subsequently dismantled and removed. The Crosby & Overton tank area, including the approximate outlines of the former tank locations, is shown on Figure 2-3.

### 2.2.3 TANK FARM AREAS

The Northwest Terminal operates two active tank farm areas. The west tank farm area was purchased by Time Oil in 1943 and the south tank farm area (formerly known as the Bell Terminal) was purchased by Time Oil in 1953 (Figure 2-2). Historically, both areas have been used by Time

Oil for the receipt, storage, and distribution of petroleum and petroleum-related products. Also, in the south tank farm area, Crosby & Overton leased property from Time Oil for a truck-washing trough during the time they were leasing the tanks in the former Crosby & Overton tank area.

Releases of petroleum products associated with operations in the western tank farm at volumes greater than 1,000 gallons have been reported on three occasions: March 8, 1975; May 9, 1990; and May 8, 1994. In 1975, over 3,500 barrels of diesel were spilled in the western tank farm area near tanks 29508 and 5312, resulting from a tank rupture as the fuel was being transferred from a barge to tank 29508. Emergency spill procedures were implemented, the spill was contained, and spill recovery operations were conducted by pumping the product from the ground surface (Time Oil 1975). In 1990, about 1,000 gallons of ethanol were released as a result of corrosion of an underground line between a pump manifold and the loading rack (about 15 ft north of the current location of well M). In response to this spill, the product line was abandoned and about 20 yd<sup>3</sup> of soil was removed, landfarmed in a lined area at the facility, and subsequently removed. Also, a vapor extraction system and well M were installed. About 300,000 gallons of ethanol-affected water was pumped from well M between January and May, 1991. The water was biologically treated and discharged under permit to the sanitary sewer system (Murphy 1996). In 1994, approximately 1,300 gallons of premium unleaded gasoline were released in an area between tanks 5312, 16003, and 14501, as a result of corrosion of a pipeline. Five monitoring wells were installed in and downgradient of the release area to monitor for the presence of the spilled product (see Section 2.3).

## 2.3 SUMMARY OF PREVIOUS INVESTIGATIONS

Beginning in 1984, a series of investigations have been conducted to evaluate the potential for soil and groundwater contamination associated with former facility operations. This section summarizes these investigations. Further information can be found in the *Remedial Activities Report* (Crosby & Overton 1989) and the *Preliminary Assessment Report* (ECOVA 1991), the latter of which was reproduced as Appendix A in the *Site Characteristics Report* (Landau Associates 1993a).

### 2.3.1 SOIL INVESTIGATIONS

Soil investigations to date have focused on three areas: the former PCP mixing area, the former Crosby & Overton tank area, and the tank farm areas.

### 2.3.1.1 Former PCP Mixing Area

In 1984, DEQ collected one soil sample from the former PCP mixing area, as part of a larger sampling program for a DEQ site inspection (DEQ 1985). The elevated concentration of PCP in the sample (1,820 µg/kg) prompted Time Oil to excavate PCP-contaminated soil from the PCP mixing area to a depth of approximately 1.5 ft (approximately 288 yd<sup>3</sup>) in mid 1985. The soil was subsequently disposed offsite at the RCRA-permitted landfill at Arlington, Oregon. Shortly thereafter, EPA banned land disposal of the soil (which EPA classified as an F027 waste).

Subsequent soil testing in 1985-1986 (Riedel 1985, 1986; SRH 1986) identified additional areas within the PCP mixing area that contained elevated PCP concentrations, generally ranging from about 1 to 8,000 mg/kg. The highest reported PCP concentration (116,000 mg/kg) was in a soil sample collected from a well boring (MW-3) (Figure 2-3) drilled underneath the southwest corner of the former PCP warehouse, at a true vertical depth of 3 ft (the well was drilled at a 45° angle). Soil samples also were collected below the foundation fill in the former PCP warehouse; PCP concentrations ranged from nondetect to 5.7 ppm (SRH 1986). These results led to an evaluation of remedial technologies.

In 1989, to reduce the potential for groundwater contamination, additional excavation within the former PCP mixing area was conducted with the intent of biologically treating the soil (ECOVA 1991). Approximately 3,000 yd<sup>3</sup> of PCP-contaminated soil were excavated in 1989 to depths ranging from less than 4 ft to a maximum of 12 ft below original grade (the approximate water table surface) within the former PCP mixing area. Despite promising bench scale results, the field studies of the treatment system were unsuccessful. The excavated soil was stockpiled onsite in a bermed, lined, and covered storage area, and the excavated area was backfilled to the present ground surface elevation. Time Oil's file data from sidewall sampling at the time of excavation in 1989 (ECOVA 1991) indicate that soil containing PCP at or above 1,000 ppm potentially remains in isolated areas of the former PCP mixing area (PCP at 1,007 ppm was reported from the southern sidewall at a depth of 7 ft) and beneath the former PCP warehouse, which was initially left unexcavated to maintain its structural integrity (one 1989 sample from below the slab contained 1,882 ppm PCP). Data for soil samples collected within the excavated area in 1989, and in the well 4 boring prior to the excavation, also indicate that elevated PCP concentrations could exist in soil below the vertical limit of excavation.

Additional soil samples were collected for PCP analyses in 1989 from within the area where excavated soil was to be stockpiled and within the soil treatment area (ECOVA 1991). All sample results were reported as nondetect.

In 1990, following excavation of the soil from the former PCP mixing area, eight samples were collected from the soil stockpile for PCP analyses; the eight samples were composited into two samples for dioxin/furan analysis. PCP concentrations ranged from less than 1 to 1,200 ppm. Dioxin/furan results were converted to an equivalent 2,3,7,7-TCDD toxicity by multiplying the concentrations by the toxicity equivalence factors (TEFs; see Appendix B). Resulting dioxin/furan concentrations were 3.11 ppb and 2.14 for the two composite samples (Friedman and Bruya 1990).

#### 2.3.1.2 Former Crosby & Overton Tank Area

Prompted by an employee's complaint of skin irritation while preparing for removal and cleaning of material from the tanks leased from Time Oil by Crosby & Overton, DEQ collected a soil sample and a sludge sample in and near tank 10002 in May 1984. Elevated PCB concentrations in the samples (60 and 1,357 mg/kg, respectively) initiated a DEQ site inspection under the HW-3012 Superfund inspection program funded by EPA. As part of the DEQ site inspection in December 1984, a single soil sample was collected from the Crosby & Overton tank area to the east of tank 5006. PCP was detected in the sample at 515 mg/kg, and tetrachlorophenol was detected at 12 mg/kg. No PCBs were detected (DEQ 1985).

In 1986, soil samples were collected around the storage tanks at depths up to 1.5 ft BGS and analyzed for oil and grease. Sample concentrations ranged from 160 to 12,200 ppm (Crosby & Overton 1986). Subsequent soil testing in 1989 identified areas within the Crosby & Overton tank area that contained elevated PCB and PCP. PCB concentrations ranged from 0.2 to 68 mg/kg, and PCP concentrations ranged from about 5 to 2,424 ppm (Crosby & Overton 1989). Polyaromatic hydrocarbons (PAH) and metals also were detected at low levels. These results led to a 1989 remedial action of removal and disposal of soil with concentrations exceeding 50 mg/kg PCBs. Four drums of soil were disposed of by Crosby & Overton in June 1989 at EnviroServices, Inc., Arlington, OR (ECOVA 1991). Composite confirmation samples collected in the excavated areas contained PCB concentrations of 1 ppm.

### 2.3.1.3 Northwest Terminal Tank Farm

As part of the DEQ site inspection in 1984, eight soil samples were collected in the western tank farm area and two samples were collected in the south tank farm area (DEQ 1985). The samples were analyzed for lead (EP toxicity), base-neutral semivolatiles, pesticides, and PCBs. Concentrations of these constituents at the sample locations were mostly nondetect, except east of tank 15002 in the west tank farm area where concentrations of PAH ranged from 13 to 105 ppm.

In 1986, the gravel used for the truck-washing trough was excavated and the trough liner was removed and disposed of at a private contractor facility (Crosby & Overton 1986). Two confirmation samples collected from the base of the excavation indicated oil and grease concentrations of 113 and 30 ppm. The excavation was filled with clean fill material. In 1989, soil in the area of the truck-washing trough again was sampled. The sample results indicated elevated levels of petroleum hydrocarbons (6,170 ppm). Base-neutral semivolatiles, metals, and PCBs also were analyzed but were either nondetected or detected at low concentrations. In May 1989, about 300 yd<sup>3</sup> of soil was excavated from the truck-washing trough area and disposed of at St. Johns Landfill. A composite sample was collected from the east wall, the bottom, and the west wall of the excavation, and analyzed for total petroleum hydrocarbons (TPH). The TPH sample results were 15 ppm. The area was backfilled with clean fill from an onsite location (Crosby & Overton 1989).

In 1994, in response to an unleaded gasoline release in the western tank farm area, five well borings were drilled and five groundwater monitoring wells were installed in and downgradient of the release area. Soil samples analyzed from the well borings indicated that soil from wells N, P, and Q (Figure 2-3) showed evidence of contamination by gasoline and diesel hydrocarbons. The soil at the top of the perched groundwater in well Q exhibited the highest gasoline concentration (210 mg/kg) and the highest diesel concentration (16,430 mg/kg) (Landau Associates 1994a).

### 2.3.2 GROUNDWATER INVESTIGATIONS

Between 1985 and mid 1990, Time Oil and its consultants installed 21 monitoring wells and six well points at the facility (Figure 2-3) (Riedel 1986; Proby 1986a,b; ECOVA 1989; Landau Associates 1994a). Of these, one well point (E) and two monitoring wells (I and 1) are damaged and will be abandoned as part of the Phase II RI. Well 4, formerly located within the former PCP mixing area, lacked an annular well seal and was abandoned in 1986. Well F is currently covered by the soil stockpile.

Test results from the onsite wells indicate the presence of elevated PCP concentrations in the upper water-bearing zone downgradient of the former PCP mixing area. The highest reported PCP concentration (60 mg/L) was detected in well J1 during the most recent sampling event (March 1991) (Friedman & Bruya 1991). PCP also has been detected in groundwater from wells B and M in the upper water-bearing zone, at 2.3 and 4 mg/L, respectively, and at wells B2, G1A, and J2 in the lower water-bearing zone at the detection limit of 1 mg/L. Benzene, ethylbenzene, toluene, and xylenes (BTEX), believed to be associated with the PCP carrier liquids, also were detected in wells B1 and J1 during 1991, at concentrations ranging from 0.005 to 1.8 mg/L.

Groundwater flow has been evaluated based on monthly water level measurements conducted by Time Oil at existing monitoring wells between August 1993 and March 1996 (Table 2-1). These evaluations have been documented in several groundwater reports (Landau Associates 1993b; 1994b,c,d; 1995) and the results are summarized in Section 2.6.

## 2.4 REGULATORY SETTING

In July 1991, Time Oil Co. entered into a voluntary cleanup program (VCP) agreement with DEQ for DEQ review and oversight of cleanup of hazardous substances at the facility (DEQ 1991). Time Oil was notified in May 1992 (DEQ 1992a) that the project was being referred to the RCRA program in lieu of continued work with the VCP because contaminated soil excavated in 1989 and stored at the terminal was a listed hazardous waste [U.S. Environmental Protection Agency (EPA) waste number F027] that required a RCRA storage permit. As required for participation in the RCRA program, an inspection of the facility was conducted by DEQ in November 1992. On December 14, 1992, a notice of noncompliance was issued (DEQ 1992b). At DEQ's request, Time Oil submitted a site characterization report to DEQ in August 1993 (Landau Associates 1993a) and submitted a draft RCRA facility investigation (RFI) work plan for the former PCP mixing area at the facility to DEQ in December 1993 (Landau Associates 1993c). In the spring of 1994, DEQ verbally advised Time Oil that the project would be transferred back to the VCP. In October 1995, Time Oil received correspondence from DEQ formally reinstating the project to DEQ's VCP (DEQ 1995). Under the VCP, the investigation shifted from a RFI to an RI/FS.

As required under the terms of the VCP, the RI/FS will be performed in accordance with the state of Oregon's Hazardous Substance Remedial Action Rules (OAR 340-122), as amended and supplemented by Oregon House Bill 3352 (HB 3352). The following key provisions of HB 3352 are pertinent to this RI/FS:

- Remedial action selection shall consider current and reasonable likely future land use scenarios.
- The preferred remedial alternative shall be a response action that balances the effectiveness of the alternative in achieving protection, the practical implementability of the alternative, long-term reliability of the response, any short-term risks posed to the community during response implementation, and the reasonableness of the costs for implementation.
- Protection of human health shall be achieved at or below a risk level of  $10^{-6}$  for exposure to individual carcinogens and a hazard quotient of 1 for exposure to noncarcinogens; an unacceptable risk level for the protection of ecological receptors is significant adverse impacts to the health or viability of threatened or endangered species or of a population of plants or animals in the vicinity of the facility.
- Protectiveness of a remedial action shall be based on acceptable risk levels for exposure instead of contaminant concentrations.
- Remedial actions for groundwater shall be considered protective of human health and the environment if they result in the restoration of current or reasonably likely future beneficial groundwater uses or if unacceptable risk to human health and the environment from the groundwater has not been identified.
- Risk assessments shall use a probabilistic risk model if practicable.
- Protection of human health and the environment may be achieved through risk management (such as containment or access restrictions) as well as through risk reduction.
- Treatment shall be the preferred action for hot spots. Groundwater contamination that is determined to have a significant adverse effect on existing or reasonably likely future beneficial uses of the water and for which treatment is reasonably likely to restore or protect such beneficial use within a reasonable time will be defined as a hot spot.

The FS will implement HB 3352 according to the regulations that are finalized before development of the remedial alternatives. Substantive elements of the EPA *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA* (EPA 1988) that are consistent with Oregon law also will be used in the preparation of the RI/FS documents and in performance of the investigations and evaluations.

## **2.5 POTENTIAL CONSTITUENTS OF CONCERN**

The potential constituents of concern are chemicals associated with former facility activities that will pose a threat to human health or to the environment at elevated concentrations. Based on current information, the potential constituents of concern include the following:

- PCP, and its breakdown products 2,3,4,6-tetrachlorophenol, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, 2,4-dichlorophenol, and 2-chlorophenol
- PCBs
- Polychlorodibenzo-dioxins and -furans, which are common trace contaminants in technical grade PCP (note that tetrachlorodibenzodioxin, the most toxic isomer, has not been identified in soil samples from the facility)
- BETX, which are components of petroleum products and may have been present in low proportions in several of the petroleum products used as carriers for the PCP or in petroleum products stored at the facility
- PAH (in particular, those designated by EPA as carcinogenic), which may have been present in low proportions in several of the petroleum products used as carriers for the PCP or handled elsewhere at the facility.

Because several carrier chemicals or additives used at the former PCP mixing area were proprietary, the RI will include priority pollutant analyses that will assist in evaluating whether carrier and additive chemicals used in the former PCP mixing operations also are present in soil and/or groundwater at concentrations of concern.

## **2.6 GEOLOGY AND HYDROGEOLOGY**

Since 1985, Time Oil and its consultants have evaluated the geology and hydrogeology in and downgradient of the former PCP mixing area by installing and gathering data from 21 monitoring wells and 6 well points. Because well points were driven, no geologic information exists for those locations. Boring logs are available for seven of the monitoring wells. Based on these logs and the available water level information, a general understanding of the facility hydrogeology was developed. The geology and hydrogeology at the facility will be further defined during the Phase II RI.

Available data (ECOVA 1991, Landau Associates 1994a, and Time Oil files) suggest that groundwater exists in alluvial sands of two shallow water-bearing zones beneath the facility. The

upper water-bearing zone, occurring at a depth interval between about 13 to 18 ft below ground surface (BGS), appears to be a discontinuous perched aquifer. A sandy silt confining layer ranging from about 2 to 5 ft thick reportedly separates the perched zone from a lower water-bearing zone and terminates southwest of the former PCP mixing area (toward the Willamette River). The lower water-bearing zone has been reported as both confined and unconfined (possibly due to seasonal or tidal influences); available data indicate that the average piezometric head of the lower water-bearing zone is about 20 to 25 ft BGS.

Groundwater flow within the upper water-bearing zone has been determined to be to the southwest, toward the river. A groundwater flow map, representing average conditions for the upper water-bearing zone, is shown on Figure 2-4. There is not a sufficient number of monitoring locations to determine the groundwater flow direction for the lower water-bearing zone at this time. Data collected from both shallow and deep monitoring wells during the monthly measurements have indicated that a downward vertical gradient generally exists between the upper and lower water-bearing zones where paired shallow and deep wells exist. An evaluation of water levels in the shallow and deep wells and in the river over time (Figures 2-5, 2-6, 2-7, and 2-8) indicate that water levels in both the shallow and deep water-bearing zones are influenced by seasonal variations in precipitation and recharge. The lower water-bearing zone also appears to be more directly influenced by stages of the Willamette River.

The geology and hydrogeology have yet to be sufficiently characterized at the facility. Information to be collected as part of the Phase II RI, including the installation of additional monitoring wells, periodic measurement of water levels, and aquifer testing, will be used in the evaluation of lithology, groundwater flow directions, vertical and horizontal gradients, and aquifer properties in each of the water-bearing zones.

## 2.7 POTENTIAL MIGRATION PATHWAYS

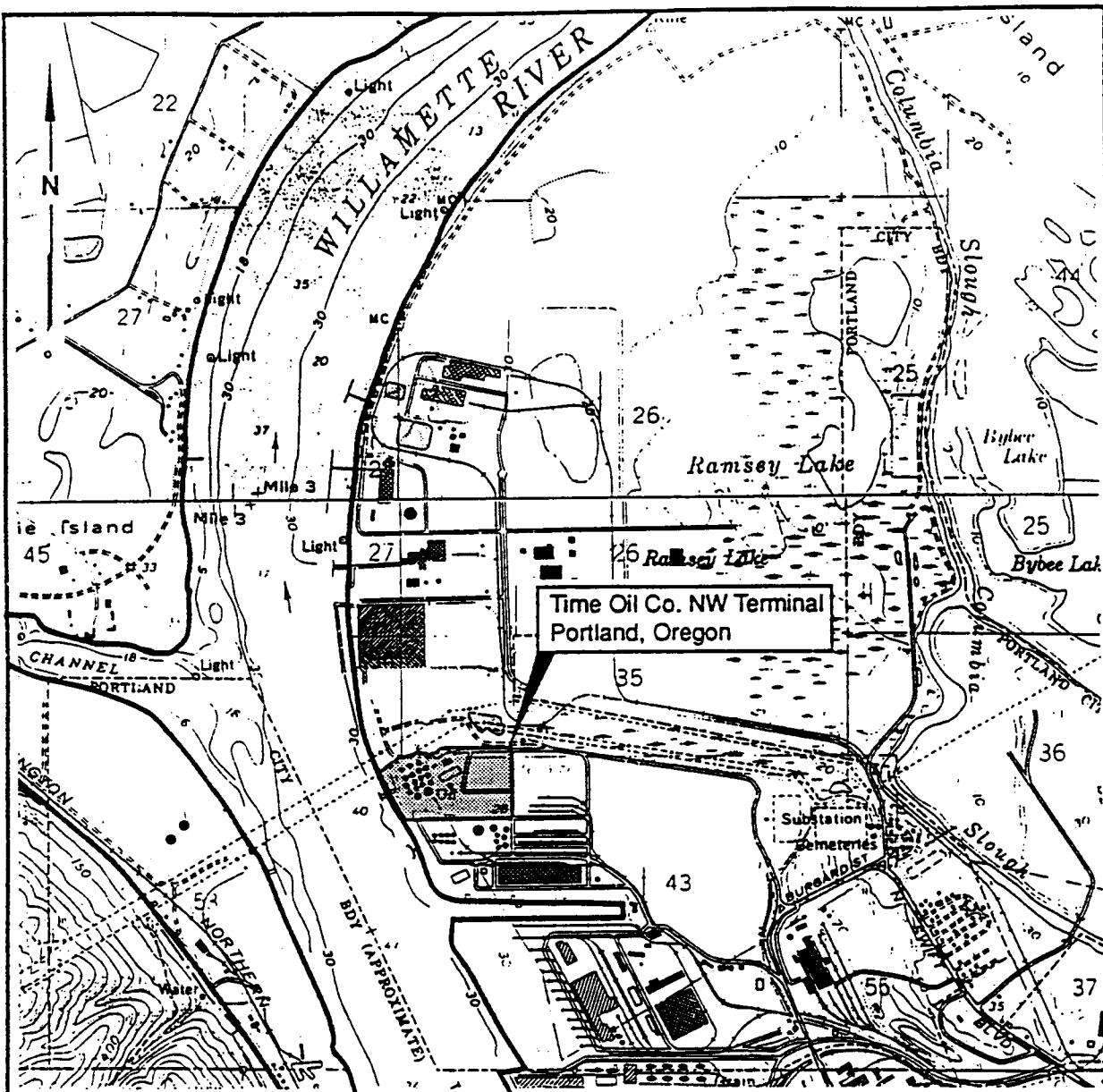
Chemicals released during past operations at the facility would be expected to migrate into the subsurface soil and into the groundwater of the upper water-bearing zone in the dissolved phase and, perhaps, as a pure phase. Based on a review of the MSDS sheets provided for components of the Koppers formulations and the formulations themselves, the most likely forms of contamination in the subsurface at the facility include:

- Pure (solid) PCP in near surface soil near the point of release (or deeper if surface disturbance or filling has occurred). Previous soil excavations at the facility are expected to have addressed most soil affected by pure PCP.

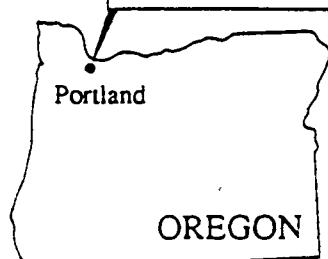
- Dissolved phase PCP and carrier components and PCBs. PCP and PCBs exhibit a relatively high tendency to sorb to organic carbon in soil, thereby retarding their movement in the environment relative to groundwater and some of the constituents in the carriers and additives used in the various PCP formulations. The extent to which this retardation actually occurs at the facility depends on, among other things, the amount of organic carbon in the subsurface soil.
- Pure phase carrier products, petroleum products, or PCP-containing formulations. If a pure phase exists at the facility, it would be expected to exist near the point of release in the unsaturated zone as residual and at the top of the capillary zone of the upper water-bearing zone (because most of the products and formulations appear to have had densities less than that of water). Any pure phase that exists at the top of the capillary zone of the upper water-bearing unit would be expected to be distributed over an interval that corresponds to the seasonal or tidal fluctuation of the groundwater.

There is also a potential at the facility for a dense pure phase, which could migrate downward under gravity through the saturated soil of the upper water-bearing zone and accumulate on lenses or units of low permeability. This potential exists because one Koppers product produced at the facility as part of the PCP mixing activities reportedly had a specific gravity greater than 1 (the volume of the denser PCP product produced at the facility relative to that of the numerous other lighter PCP products is not known, but is believed to be significantly less). PCP itself is also denser than water.

The occurrence of these constituents in all of these forms will be evaluated during the Phase II RI.



SITE LOCATION  
(See enlarged map area, above)



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A

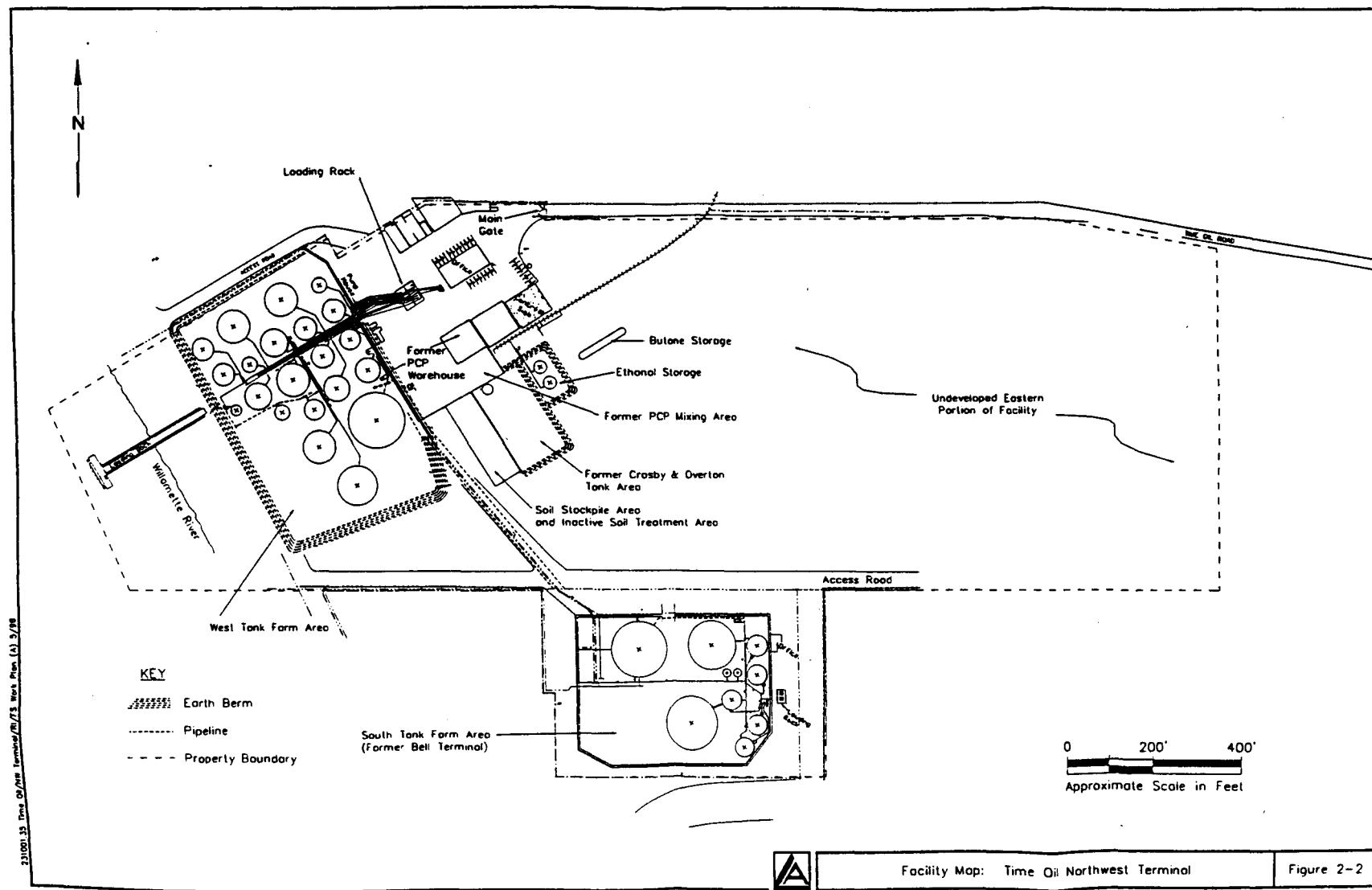
Vicinity Map

Figure 2-1

10000

BZTO104(e)042138

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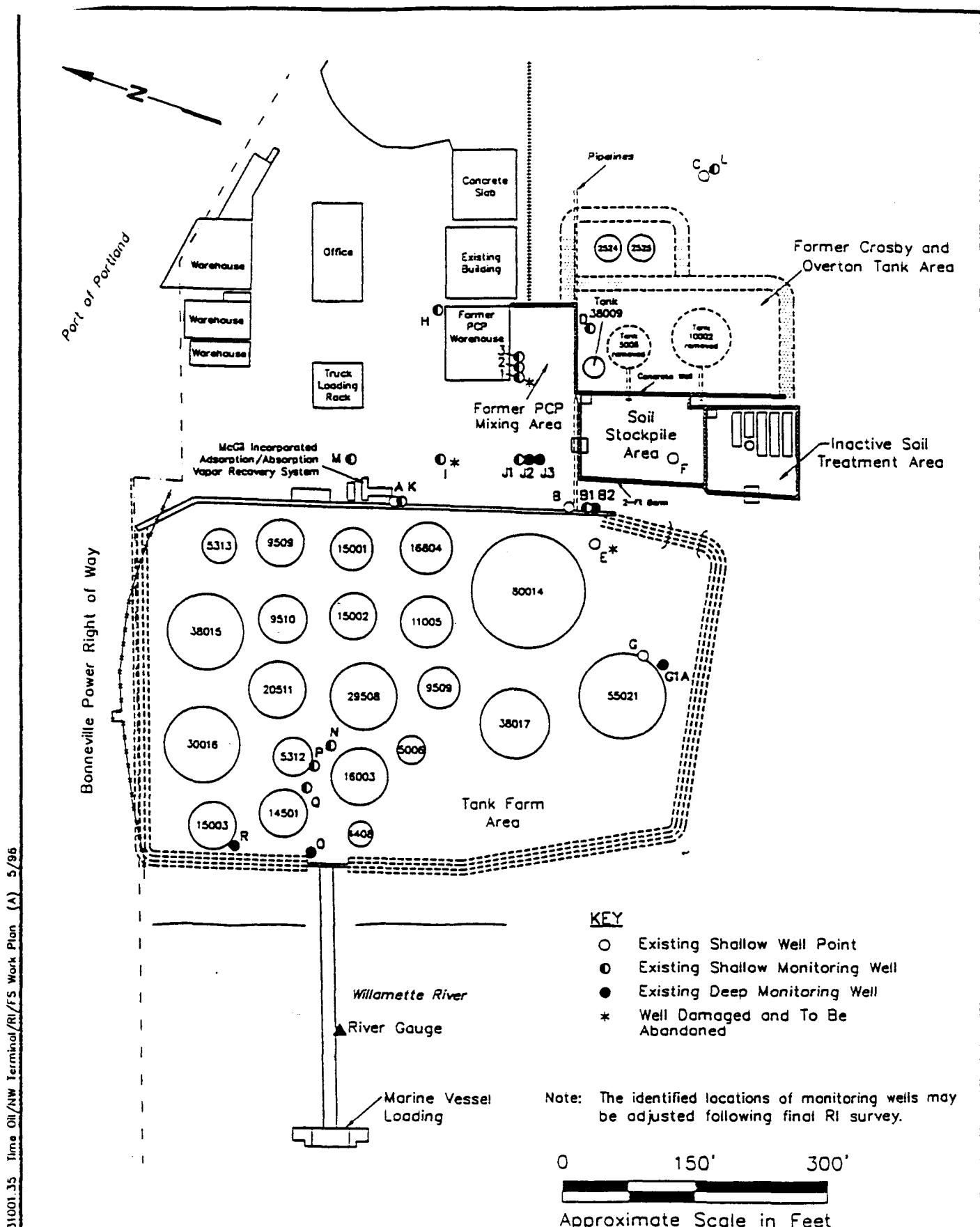


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TOLS005318

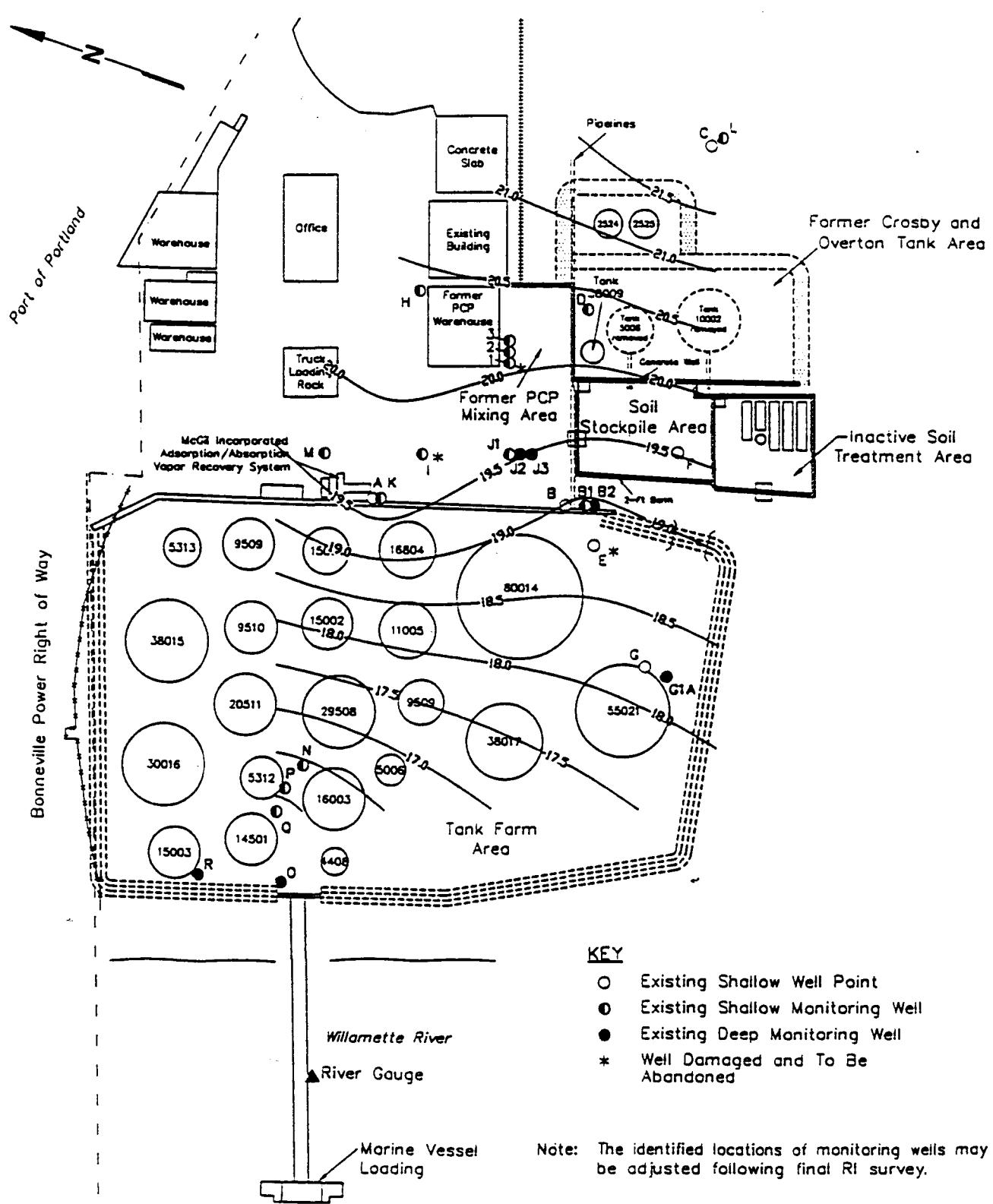
TOLSO05319

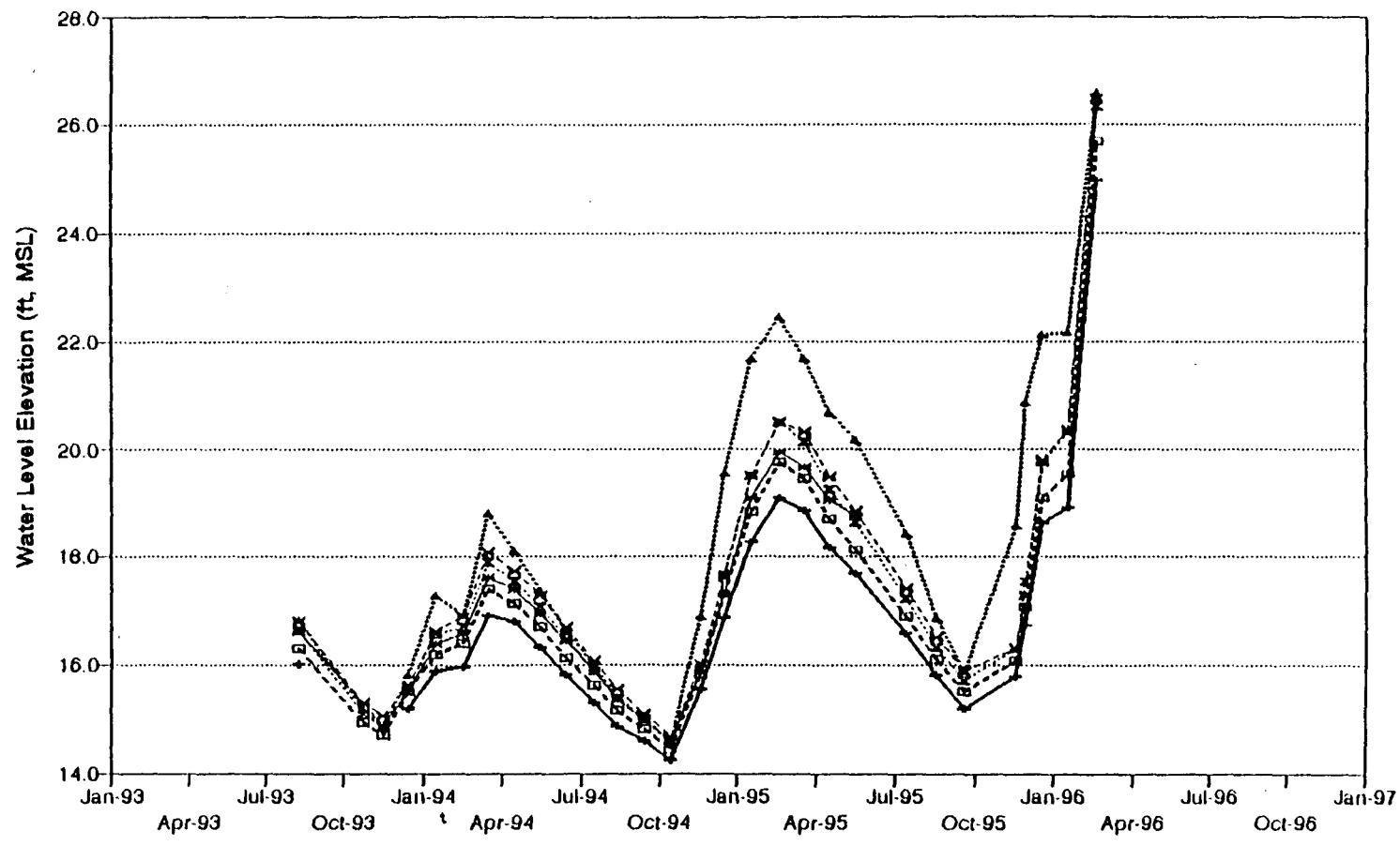
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TOLSO05320

1000





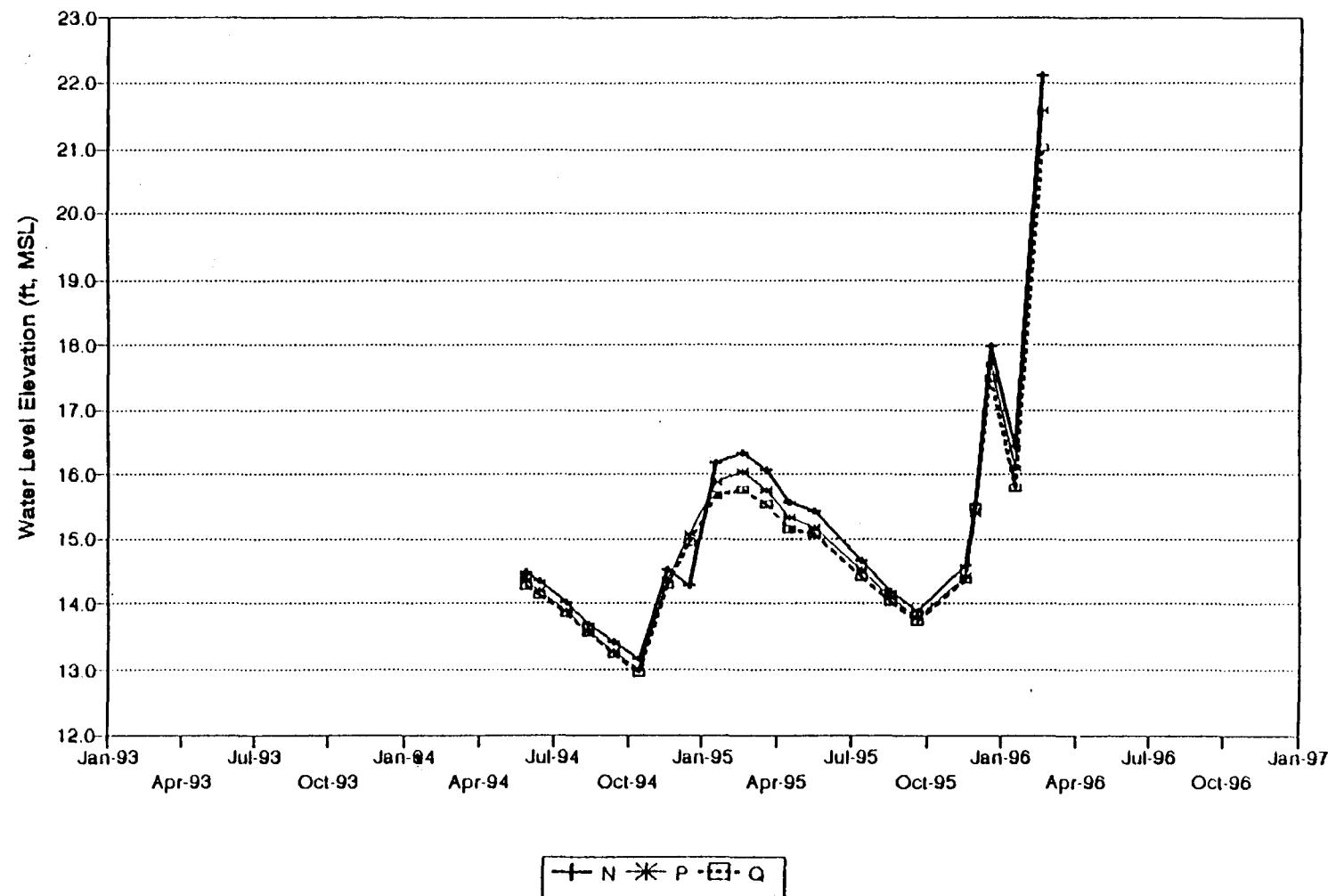
TOLS005321

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Water Level Elevation Trends  
Shallow Wells - Group #1

Figure 2-5

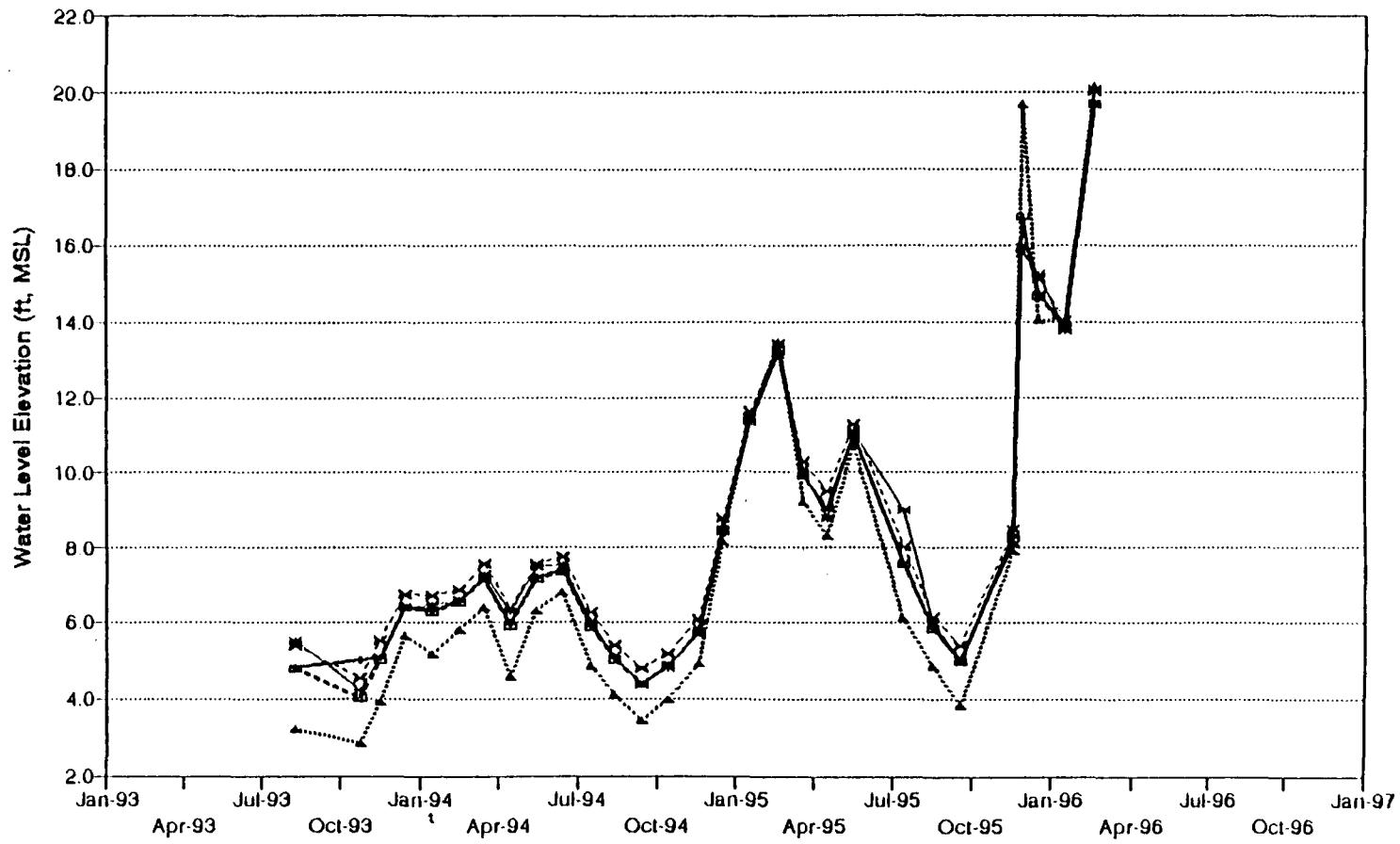


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Water Level Elevation Trends  
Shallow Wells - Group #2

Figure 2-6

10000



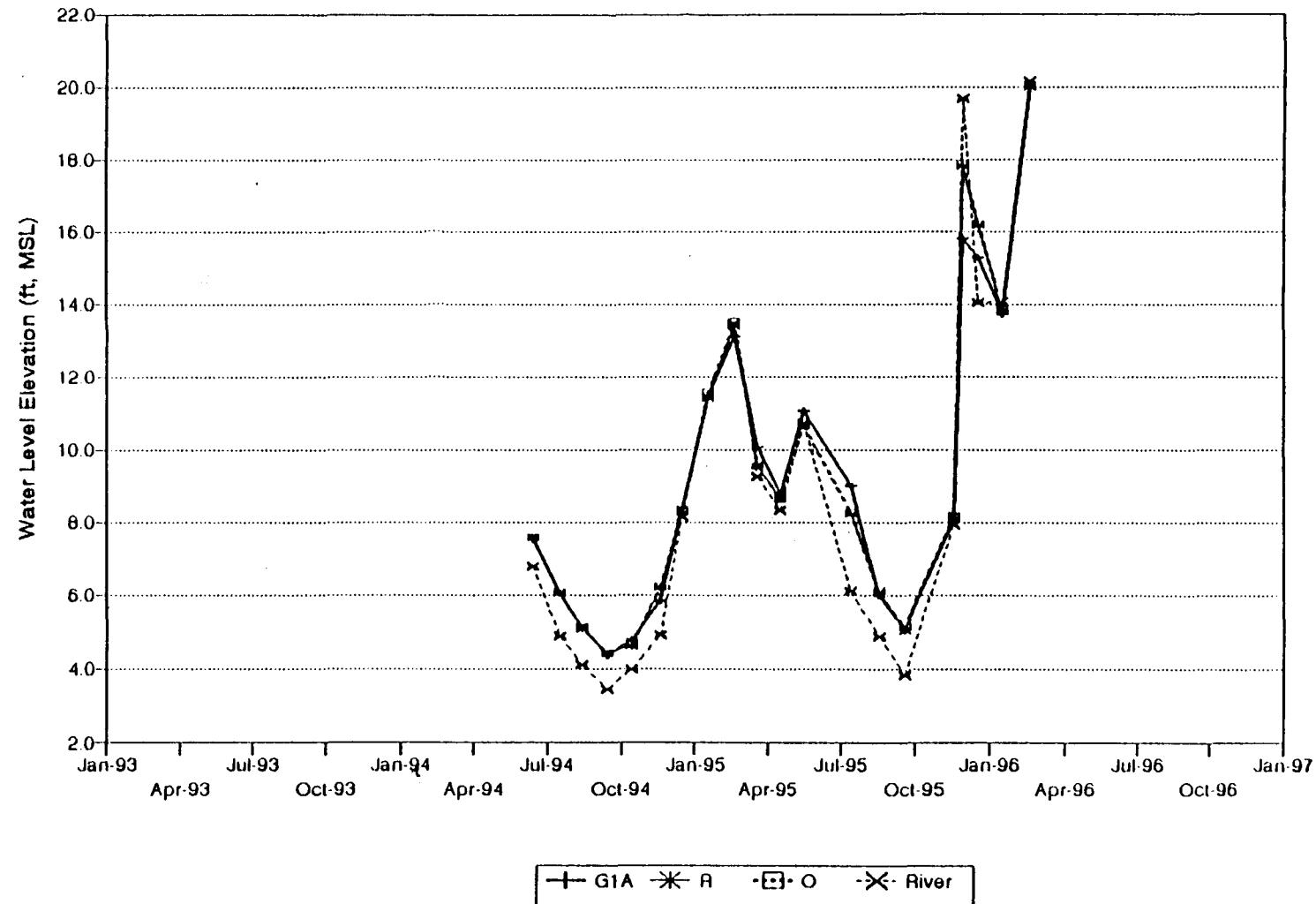
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Water Level Elevation Trends  
Deep Wells - Group #1

Figure 2-7

10000



TOLS005324

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Water Level Elevation Trends  
Deep Wells - Group #2

Figure 2-8

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (ft)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
<b>Shallow Wells:</b>							
A *	08/11/93	10:26	29.38	12.98	16.42	NM	Baller would not fit for LNAPL check
A *	10/26/93	14:14	29.38	14.33	15.05	---	
A *	11/17/93	14:03	29.38	13.15	16.23	---	
A *	12/17/93	13:38	29.38	13.20	16.18	---	
B *	01/17/94	13:39	29.38	13.02	16.38	---	
	02/18/94	14:42	29.38	12.84	16.54	---	
	03/18/94	13:19	29.38	11.77	17.61	---	
A *	04/18/94	14:59	29.38	11.68	17.70	---	
A *	05/18/94	15:35	29.38	12.10	17.28	---	
A *	06/17/94	15:20	29.38	12.35	17.03	---	
A *	07/19/94	09:45	29.38	13.30	16.08	---	
A *	08/17/94	07:57	29.38	14.02	15.38	---	
A *	09/16/94	07:52	29.38	14.50	14.88	---	
A *	10/17/94	09:17	29.38	14.78	14.60	---	
A *	11/21/94	12:15	29.38	13.53	15.85	---	
A *	12/19/94	11:33	29.38	12.10	17.28	---	
A *	01/18/95	11:37	29.38	10.45	18.93	---	
A *	02/21/95	13:42	29.38	9.50	19.88	---	
A *	03/21/95	13:15	29.38	9.82	19.58	---	
A *	04/19/95	13:05	29.38	9.85	19.53	---	
A *	05/19/95	13:52	29.38	10.95	18.43	---	
A *	07/17/95	14:08	29.38	12.00	17.38	---	
A *	08/22/95	08:08	29.38	13.20	16.18	---	
A *	09/22/95	08:52	29.38	13.60	15.78	---	
A *	11/20/95	08:16	29.38	13.10	16.28	---	
A *	12/01/95	08:43	29.38	12.20	17.18	---	
A *	12/19/95	07:44	29.38	9.91	19.47	---	
	01/19/96	08:58	29.38	9.66	19.72	---	
	02/20/96	11:05	29.38	3.35	26.03	---	
A *	03/19/96	09:35	29.38	5.65	23.73	---	
A *	04/19/96	12:05	29.38	8.24	21.14	---	
B *	08/11/93	09:40	29.04	NM	---	NM	Not accessible - cap rusted on

10000

TOLS005325

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
B1	08/11/93	09:47	29.74	13.71	16.03	....	
B1	10/26/93	---	29.74	NM	---	....	
B1	11/17/93	---	29.74	NM	---	....	Could not access - cap stuck
B1	12/17/93	13:03	29.74	14.52	15.22	....	Could not access - cap stuck
B1	01/17/94	13:14	29.74	13.86	15.88	....	
B1	02/18/94	14:22	29.74	13.76	15.98	....	
B1	03/18/94	13:01	29.74	12.81	16.93	....	
B1	04/18/94	14:43	29.74	12.94	16.80	....	
B1	05/18/94	15:23	29.74	13.42	16.32	....	
B1	06/17/94	14:55	29.74	13.91	15.83	....	
B1	07/19/94	09:21	29.74	14.40	15.34	....	
B1	08/17/94	07:38	29.74	14.85	14.89	....	
B1	09/16/94	07:38	29.74	15.15	14.59	....	
B1	10/17/94	09:04	29.74	15.50	14.24	....	
B1	11/21/94	11:52	29.74	14.19	15.55	....	
B1	12/18/94	11:12	29.74	12.88	16.88	....	
B1	01/18/95	11:18	29.74	11.45	18.29	....	
B1	02/21/95	13:24	29.74	10.65	19.09	....	
B1	03/21/95	13:06	29.74	10.87	18.87	....	
B1	04/19/95	12:48	29.74	11.56	18.18	....	
B1	05/19/95	13:40	29.74	12.03	17.71	....	
B1	07/17/95	13:56	29.74	13.15	18.59	....	
B1	08/22/95	07:54	29.74	13.92	15.82	....	
B1	09/22/95	08:31	29.74	14.53	15.21	....	
B1	11/20/95	07:58	29.74	13.95	15.70	....	
B1	12/01/95	08:30	29.74	13.00	16.74	....	
B1	12/19/95	07:28	29.74	11.08	18.66	....	
B1	01/19/96	08:39	29.74	10.82	18.92	....	
B1	02/20/96	10:43	29.74	4.77	24.97	....	
B1	03/18/96	09:25	29.74	7.06	22.68	....	
B1	04/19/96	11:54	29.74	9.64	20.10	....	

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TOLS005326

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
C *	08/10/93	15:35	28.89	dry	—	NM	Dry; no check for sheen
C *	10/26/93	13:10	28.89	dry	—	—	—
C *	11/17/93	13:14	28.89	dry	—	—	—
C *	12/17/93	12:40	28.89	dry	—	—	—
C *	01/17/94	12:48	28.89	dry	—	—	—
C *	02/18/94	14:03	28.89	dry	—	—	—
C *	03/18/94	12:35	28.89	9.32	19.57	—	—
C *	04/18/94	14:29	28.89	9.55	19.34	—	—
C *	05/18/94	15:09	28.89	dry	—	—	—
C *	06/17/94	14:40	28.89	dry	—	—	—
C *	07/19/94	09:01	28.89	dry	—	—	—
C *	08/17/94	07:21	28.89	dry	—	—	—
C *	09/16/94	07:24	28.89	dry	—	—	—
C *	10/17/94	08:52	28.89	dry	—	—	—
C *	11/21/94	11:38	28.89	dry	—	—	—
C *	12/19/94	10:40	28.89	dry	—	—	—
C *	01/18/95	10:50	28.89	7.78	21.11	—	—
C *	02/21/95	13:10	28.89	7.08	21.83	—	—
C *	03/21/95	12:54	28.89	6.90	21.99	—	—
C *	04/19/95	12:30	28.89	6.90	21.99	—	—
C *	05/19/95	13:18	28.89	7.97	20.92	—	—
C *	07/17/95	13:43	28.89	dry	—	—	—
C *	08/22/95	07:41	28.89	dry	—	—	—
C *	09/22/95	08:14	28.89	dry	—	—	—
C *	11/20/95	07:45	28.89	dry	—	—	—
C *	12/01/95	08:19	28.89	9.09	19.80	—	—
C *	12/19/95	07:03	28.89	7.32	21.57	—	—
C *	01/19/96	08:23	28.89	7.20	21.69	—	—
C *	02/20/96	10:29	28.89	2.33	26.56	—	Area flooded during 2/9/96 flood event
C *	03/19/96	09:09	28.89	3.40	25.49	—	—
C *	04/19/96	11:41	28.89	6.30	22.59	—	—

TOLS005327

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**Table 2-1**  
**Summary of Water Level Measurements**  
**Time Oil Co., NW Terminal**  
**Portland, Oregon**

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
D	08/10/93	15:58	30.04	13.39	16.65	---	
D	10/26/93	14:07	30.04	14.94	15.10	---	
D	11/17/93	13:50	30.04	15.18	14.88	---	
D	12/17/93	13:23	30.04	14.47	15.57	---	
D	01/17/94	13:31	30.04	13.49	16.55	---	
D	02/18/94	14:37	30.04	13.33	16.71	---	
D	03/18/94	13:13	30.04	12.15	17.89	---	
D	04/18/94	14:53	30.04	12.48	17.56	---	
D	05/18/94	15:30	30.04	12.97	17.07	---	
D	06/17/94	15:11	30.04	13.56	16.48	---	
D	07/19/94	09:36	30.04	14.15	15.89	---	
D	08/17/94	07:50	30.04	14.67	15.37	---	
D	09/16/94	07:47	30.04	15.03	15.01	---	
D	10/17/94	09:13	30.04	15.48	14.58	---	
D	11/21/94	12:05	30.04	14.02	16.02	---	
D	12/19/94	11:26	30.04	12.37	17.67	---	
D	01/16/95	11:31	30.04	10.53	19.51	---	
D	02/21/95	13:37	30.04	9.55	20.49	---	
D	03/21/95	13:12	30.04	9.81	20.13	---	
D	04/19/95	13:00	30.04	10.78	19.26	---	
D	05/19/95	13:58	30.04	11.39	18.65	---	
D	07/17/95	14:04	30.04	12.81	17.23	---	
D	08/22/95	08:05	30.04	13.70	16.34	---	
D	09/22/95	08:46	30.04	14.32	15.72	---	
D	11/20/95	08:13	30.04	13.73	16.31	---	
D	12/01/95	08:41	30.04	12.48	17.56	---	
D	12/19/95	07:41	30.04	10.26	19.78	---	
D	01/19/96	08:55	30.04	9.71	20.33	---	
D	02/20/96	11:01	30.04	3.71	26.33	---	
D	03/19/96	09:33	30.04	6.02	24.02	---	
D	04/19/96	12:03	30.04	8.56	21.48	---	
E *	08/11/93	09:25	---	NM	---	NM	Well filled in with soil; dry; to be abandoned
F *	08/10/93	16:10	---	NM	---	NM	Covered by soil stockpile

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TOLS005328

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
G *	08/11/93	08:35	30.24	dry	----	NM	Dry; no check for sheen
G *	10/26/93	13:27	30.24	dry	----	----	
G *	11/17/93	13:27	30.24	14.75	15.49	----	
G *	12/17/93	12:55	30.24	14.73	15.51	----	
G *	01/17/94	13:08	30.24	14.68	15.56	----	
*	02/18/94	14:17	30.24	dry	----	----	
*	03/18/94	12:55	30.24	14.75	15.49	----	
G *	04/18/94	14:39	30.24	14.75	15.49	----	
G *	05/18/94	15:19	30.24	14.75	15.49	----	
G *	06/17/94	14:51	30.24	14.74	15.50	----	
G *	07/19/94	09:15	30.24	dry	----	----	
G *	08/17/94	07:31	30.24	dry	----	----	
G *	09/16/94	07:35	30.24	dry	----	----	
G *	10/17/94	09:01	30.24	dry	----	----	
G *	11/21/94	11:48	30.24	dry	----	----	
G *	12/19/94	11:08	30.24	dry	----	----	
G *	01/18/95	11:14	30.24	14.74	15.50	----	
G *	02/21/95	13:21	30.24	14.75	15.49	----	
G *	03/21/95	13:02	30.24	14.74	15.50	----	
G *	04/19/95	12:45	30.24	14.75	15.49	----	
G *	05/19/95	13:35	30.24	14.75	15.49	----	
G *	07/17/95	13:53	30.24	14.76	15.48	----	
G *	08/22/95	07:50	30.24	14.74	15.50	----	
G *	09/22/95	08:25	30.24	dry	----	----	
G *	11/20/95	07:54	30.24	dry	----	----	
G *	12/01/95	08:27	30.24	14.75	15.49	----	
G *	12/19/95	07:23	30.24	11.75	18.49	----	
*	01/19/96	08:35	30.24	14.75	15.49	----	
*	02/20/96	10:40	30.24	7.71	22.53	----	
G *	03/19/96	09:21	30.24	12.00	18.24	----	
G *	04/19/96	11:49	30.24	dry	----	----	

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TOLS005329

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
H	08/11/93	12:36	27.08	10.27	16.81	....	
H	10/26/93	14:01	27.08	11.75	15.33	....	
H	11/17/93	13:46	27.08	12.00	15.08	....	
H	12/17/93	13:19	27.08	11.44	15.64	....	
H	01/17/94	13:27	27.08	10.45	16.63	....	
H	02/18/94	14:33	27.08	10.20	16.88	....	
H	03/18/94	13:11	27.08	9.00	18.08	....	
H	04/18/94	14:50	27.08	9.32	17.76	....	
H	05/18/94	15:27	27.08	9.81	17.27	....	
H	06/17/94	15:08	27.08	10.39	16.69	....	
H	07/19/94	09:34	27.08	11.00	16.08	....	
H	08/17/94	07:48	27.08	11.54	15.54	....	
H	09/16/94	07:45	27.08	11.97	15.11	....	
H	10/17/94	09:11	27.08	12.38	14.72	....	
H	11/21/94	12:02	27.08	11.05	16.03	....	
H	12/19/94	11:23	27.08	9.45	17.63	....	
H	01/18/95	11:29	27.08	7.58	19.52	....	
H	02/21/95	13:35	27.08	6.57	20.51	....	
H	03/21/95	13:11	27.08	6.75	20.33	....	
H	04/19/95	12:57	27.08	7.58	19.50	....	
H	05/19/95	13:55	27.08	8.21	18.87	....	
H	07/17/95	14:02	27.08	9.65	17.43	....	
H	08/22/95	08:02	27.08	10.55	16.53	....	
H	09/22/95	08:43	27.08	11.18	15.90	....	
H	11/20/95	08:10	27.08	10.75	16.33	....	
H	12/01/95	08:37	27.08	9.80	17.28	....	
H	12/19/95	07:38	27.08	7.28	19.80	....	
H	01/19/96	08:48	27.08	8.69	20.39	....	
H	02/20/96	10:51	27.08	0.60	26.48	....	Area flooded during 2/9/96 flood event
H	03/19/96	09:30	27.08	2.68	24.40	....	
H	04/19/96	12:00	27.08	5.22	21.86	....	
I	08/11/93	NA	....	NM	....	NM	Covered w/bucket; damaged; to be abandoned

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TOLS005330

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1) (ft)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
J1	08/11/93	11:23	29.70	13.39	16.31	---	
J1	10/26/93	13:56	29.70	14.75	14.95	---	
J1	11/17/93	13:39	29.70	15.00	14.70	---	
J1	12/17/93	13:11	29.70	14.18	15.52	---	
J1	01/17/94	13:22	29.70	13.50	16.20	---	
J1	02/18/94	14:30	29.70	13.32	16.38	---	
J1	03/18/94	13:07	29.70	12.31	17.39	---	
J1	04/18/94	14:47	29.70	12.55	17.15	---	
J1	05/18/94	15:25	29.70	13.00	16.70	---	
J1	06/17/94	15:02	29.70	13.57	16.13	---	
J1	07/19/94	09:27	29.70	14.06	15.64	---	
J1	08/17/94	07:42	29.70	14.53	15.17	---	
J1	09/16/94	07:43	29.70	14.87	14.83	---	
J1	10/17/94	09:09	29.70	15.26	14.44	---	
J1	11/21/94	11:58	29.70	13.88	15.82	---	
J1	12/10/94	11:20	29.70	12.40	17.30	---	
J1	01/18/95	11:25	29.70	10.88	18.84	---	
J1	02/21/95	13:30	29.70	9.94	19.76	---	
J1	03/21/95	13:09	29.70	10.25	19.45	---	
J1	04/19/95	12:54	29.70	10.99	18.71	---	
J1	05/19/95	13:45	29.70	11.55	18.15	---	
J1	07/17/95	14:00	29.70	12.81	16.89	---	
J1	08/22/95	07:59	29.70	13.59	16.11	---	
J1	09/22/95	08:38	29.70	14.18	15.52	---	
J1	11/20/95	08:05	29.70	13.63	16.07	---	
J1	12/01/95	08:35	29.70	12.65	17.05	---	
J1	12/19/95	07:34	29.70	10.59	19.11	---	
J1	01/19/96	08:43	29.70	10.14	19.56	---	
J1	02/20/96	10:48	29.70	4.00	25.70	---	
J1	03/19/96	09:28	29.70	8.24	23.46	---	
J1	04/19/96	11:57	29.70	8.65	21.05	---	

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TOLS005331

Table 2-1  
**Summary of Water Level Measurements**  
**Time Oil Co., NW Terminal**  
**Portland, Oregon**

Well	Date	Time	Reference Elevation (1) (ft)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
K	08/11/93	10:40	29.42	12.98	16.44	....	
K	10/26/93	14:17	29.42	14.35	15.07	....	
K	11/17/93	14:07	29.42	14.63	14.79	....	
K	12/17/93	13:40	29.42	13.82	15.60	....	
K	01/17/94	13:42	29.42	13.02	16.40	....	
K	02/18/94	14:45	29.42	12.84	16.58	....	
K	03/18/94	13:20	29.42	11.80	17.62	....	
K	04/18/94	15:00	29.42	12.00	17.42	....	
K	05/18/94	15:36	29.42	12.55	16.87	....	
K	06/17/94	15:21	29.42	13.03	16.39	....	
K	07/19/94	09:46	29.42	13.65	15.77	....	
K	08/17/94	07:58	29.42	14.15	15.27	....	
K	09/16/94	07:53	29.42	14.52	14.90	....	
K	10/17/94	09:18	29.42	14.91	14.51	....	
K	11/21/94	12:17	29.42	13.52	15.90	....	
K	12/19/94	11:34	29.42	11.96	17.46	....	
K	01/18/95	11:38	29.42	10.46	18.96	....	
K	02/21/95	13:46	29.42	9.52	19.90	....	
K	03/21/95	13:16	29.42	9.83	19.59	....	
K	04/19/95	13:06	29.42	10.57	18.85	....	
K	05/19/95	13:50	29.42	11.12	18.30	....	
K	07/17/95	14:09	29.42	12.30	17.12	....	
K	08/22/95	08:09	29.42	13.22	16.20	....	
K	09/22/95	08:54	29.42	13.80	15.62	....	
K	11/20/95	08:18	29.42	13.25	16.17	....	
K	12/01/95	08:44	29.42	12.25	17.17	....	
K	12/19/95	07:45	29.42	10.11	19.31	....	
K	01/19/96	08:59	29.42	9.65	19.77	....	
K	02/20/96	11:06	29.42	3.61	25.81	....	
K	03/19/96	09:36	29.42	5.69	23.73	....	
K	04/19/96	12:06	29.42	8.12	21.30	....	

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TOLS005332

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
L	08/10/93	15:40	28.10	11.27	16.83	---	
L	10/26/93	13:12	28.10	12.90	15.20	---	
L	11/17/93	13:18	28.10	13.21	14.89	---	
L	12/17/93	12:41	28.10	12.28	15.82	---	
L	01/17/94	12:50	28.10	10.81	17.29	---	
L	02/18/94	14:05	28.10	11.17	16.93	---	
L	03/18/94	12:37	28.10	9.28	18.82	---	
L	04/18/94	14:30	28.10	9.98	18.12	---	
L	05/18/94	15:10	28.10	10.73	17.37	---	
L	06/17/94	14:41	28.10	11.45	16.65	---	
L	07/19/94	09:02	28.10	12.14	15.96	---	
L	08/17/94	07:22	28.10	12.69	15.41	---	
L	09/16/94	07:28	28.10	13.10	15.00	---	
L	10/17/94	08:53	28.10	13.51	14.59	---	
L	11/21/94	11:39	28.10	11.21	16.89	---	
L	12/19/94	10:45	28.10	8.53	19.57	---	
L	01/18/95	10:52	28.10	6.40	21.70	---	
L	02/21/95	13:11	28.10	5.65	22.45	---	
L	03/21/95	12:55	28.10	6.41	21.69	---	
L	04/19/95	12:32	28.10	7.42	20.68	---	
L	05/19/95	13:18	28.10	7.92	20.18	---	
L	07/17/95	13:44	28.10	9.65	18.45	---	
L	08/22/95	07:42	28.10	11.23	16.87	---	
L	09/22/95	08:15	28.10	12.21	15.89	---	
L	11/20/95	07:46	28.10	9.50	18.60	---	
L	12/01/95	08:20	28.10	7.21	20.89	---	
L	12/19/95	07:05	28.10	5.99	22.11	---	
L	01/19/96	08:25	28.10	5.92	22.18	---	
L	02/20/96	10:31	28.10	1.52	26.58	---	
L	03/19/96	09:12	28.10	3.70	24.40	---	
L	04/19/96	11:42	28.10	5.78	22.34	---	

Area flooded during 2/9/96 flood event

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TOLS005333

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
M	08/10/93	16:23	28.15	11.55	18.60	NM	
M	10/26/93	14:13	28.15	12.86	15.29	....	
M	11/17/93	13:59	28.15	13.25	14.90	....	
M	12/17/93	13:27	28.15	12.62	15.53	....	
M	01/17/94	13:34	28.15	11.76	16.39	....	
	02/18/94	14:40	28.15	11.60	16.55	....	
	03/18/94	13:16	28.15	10.52	17.63	....	
M	04/18/94	14:57	28.15	10.75	17.40	....	
M	05/18/94	15:32	28.15	11.20	16.95	....	
M	06/17/94	15:15	28.15	11.70	16.45	....	
M	07/19/94	09:39	28.15	12.25	15.90	....	
M	08/17/94	07:54	28.15	12.80	15.35	....	
M	09/16/94	07:49	28.15	13.15	15.00	....	
M	10/17/94	09:15	28.15	13.55	14.60	....	
M	11/21/94	12:08	28.15	12.29	15.86	....	
M	12/19/94	11:30	28.15	10.85	17.30	....	
M	01/18/95	11:34	28.15	9.05	19.10	....	
M	02/21/95	13:40	28.15	8.17	19.98	....	
M	03/21/95	13:14	28.15	8.45	19.70	....	
M	04/19/95	13:03	28.15	9.07	19.08	....	
M	05/19/95	14:00	28.15	9.38	18.77	....	
M	07/17/95	....	....	NM	....	....	
M	08/22/95	....	....	NM	....	....	
M	09/22/95	....	....	NM	....	....	
M	11/20/95	....	....	NM	....	....	
M	12/01/95	....	....	NM	....	....	
M	12/19/95	....	....	NM	....	....	
M	01/19/96	....	....	NM	....	....	
M	02/20/96	....	....	NM	....	....	
M	03/19/96	....	....	NM	....	....	
M	04/19/96	....	....	NM	....	....	

Measurement inhibited by submersible pump wiring.

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TOLS005334

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
N	05/31/94	16:30	31.40	16.95	14.45	---	
N	06/01/94	08:35	31.40	16.90	14.50	---	
N	06/17/94	15:35	31.40	17.05	14.35	---	
N	07/19/94	09:56	31.40	17.38	14.02	---	
N	08/17/94	08:06	31.40	17.70	13.70	---	
N	09/16/94	07:58	31.40	17.96	13.44	---	
N	10/17/94	09:25	31.40	18.23	13.17	---	
N	11/21/94	12:26	31.40	18.88	14.54	---	
N	12/19/94	11:42	31.40	17.11	14.29	---	
N	01/18/95	11:48	31.40	15.22	16.18	---	
N	02/21/95	13:54	31.40	15.07	16.33	---	
N	03/21/95	13:21	31.40	15.33	16.07	---	
N	04/19/95	13:15	31.40	15.82	15.58	---	
N	05/19/95	14:04	31.40	15.96	15.44	---	
N	07/17/95	14:15	31.40	16.73	14.67	---	
N	08/22/95	08:16	31.40	17.19	14.21	---	
N	09/22/95	09:05	31.40	17.51	13.89	---	
N	11/20/95	08:26	31.40	16.80	14.60	---	
N	12/01/95	09:01	31.40	15.85	15.55	---	
N	12/19/95	07:53	31.40	13.42	17.98	---	
N	01/19/96	09:06	31.40	14.96	16.44	---	
N	02/20/96	11:14	31.40	9.30	22.10	---	
N	03/19/96	09:41	31.40	12.63	18.57	---	
N	04/19/96	12:12	31.40	15.00	16.40	0.12	Free product

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TOLS005335

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
P	05/31/94	16:34	29.96	15.61	14.35	---	
P	06/01/94	08:39	29.96	15.62	14.34	---	Strong odor; heavy sheen; no measurable free phase product
P	06/17/94	15:41	29.96	15.75	14.21	---	
P	07/19/94	10:08	29.96	16.06	13.90	---	Strong odor noted; no product
P	08/17/94	08:09	29.96	16.37	13.59	---	
P	09/16/94	08:00	29.96	16.67	13.29	---	Hydrocarbon odor
P	10/17/94	09:27	29.96	16.93	13.03	---	
P	11/21/94	12:29	29.96	15.61	14.35	---	Hydrocarbon odor
P	12/19/94	11:44	29.96	14.87	15.09	---	Hydrocarbon odor
P	01/18/95	11:49	29.96	14.06	15.90	---	
P	02/21/95	13:58	29.96	13.91	16.05	---	
P	03/21/95	13:22	29.96	14.19	15.77	---	
P	04/19/95	13:17	29.96	14.62	15.34	---	
P	05/19/95	14:06	29.96	14.77	15.19	---	
P	07/17/95	14:16	29.96	15.45	14.51	---	
P	08/22/95	08:17	29.96	15.87	14.09	---	
P	09/22/95	09:07	29.96	16.17	13.79	---	
P	11/20/95	08:28	29.96	15.54	14.42	---	
P	12/01/95	09:02	29.96	14.55	15.41	---	
P	12/19/95	07:58	29.96	12.23	17.73	---	
P	01/19/96	09:07	29.96	13.84	16.12	---	Hydrocarbon odor
P	02/20/96	11:16	29.96	8.37	21.59	---	Hydrocarbon odor
P	03/19/96	09:43	29.96	12.33	17.63	---	Well has spots of oil on gauge
P	04/19/96	12:21	29.96	14.00	15.98	0.08	Free product

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TOLS005336

**Table 2-1**  
**Summary of Water Level Measurements**  
**Time Oil Co., NW Terminal**  
**Portland, Oregon**

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
Q	05/31/94	16:35	30.36	16.08	14.28	....	
Q	06/01/94	08:50	30.36	16.09	14.27	0.01	<b>Free product</b>
Q	06/17/94	15:49	30.36	16.22	14.14	....	<b>No product</b>
Q	07/19/94	10:14	30.36	16.51	13.85	....	<b>Strong odor noted; no product</b>
Q	08/17/94	08:11	30.36	16.80	13.56	....	
Q	09/16/94	08:02	30.36	17.11	13.25	....	<b>Hydrocarbon odor</b>
Q	10/17/94	09:29	30.36	17.40	12.96	....	
Q	11/21/94	12:33	30.36	16.06	14.30	....	<b>Hydrocarbon odor</b>
Q	12/19/94	11:45	30.36	15.40	14.96	....	<b>Hydrocarbon odor</b>
Q	01/18/95	11:51	30.36	14.69	15.67	....	
Q	02/21/95	14:02	30.36	14.60	15.76	....	
Q	03/21/95	13:23	30.36	14.82	15.54	....	
Q	04/19/95	13:18	30.36	15.20	15.16	....	
Q	05/19/95	14:07	30.36	15.28	15.08	....	
Q	07/17/95	14:17	30.36	15.95	14.41	....	
Q	08/22/95	08:18	30.36	16.32	14.04	....	
Q	09/22/95	09:11	30.36	16.64	13.72	....	
Q	11/20/95	08:30	30.36	15.98	14.38	....	
Q	12/01/95	09:03	30.36	14.83	15.53	....	
Q	12/19/95	07:58	30.36	12.65	17.51	....	
Q	01/19/96	09:08	30.36	14.55	15.81	....	
Q	02/20/96	11:18	30.36	9.35	21.01	....	
Q	03/19/96	09:45	30.36	13.77	16.59	0.51	<b>Free product</b>
Q	04/19/96	12:24	30.36	14.80	15.56	0.52	<b>Free product</b>

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TOLS005337

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
1	08/11/93	11:46	28.35	16.58 (3)	16.63 (3)	---	
1	10/26/93	14:21	28.35	18.50 (3)	15.27 (3)	---	
1	11/17/93	14:11	28.35	18.97 (3)	14.94 (3)	---	
1	12/17/93	13:43	28.35	17.97 (3)	15.64 (3)	---	
1	01/17/94	13:45	28.35	18.84 (3)	16.44 (3)	---	
1	02/18/94	NA	---	NM	---	---	Well angled at 45 degrees; no sheen, strong solvent like odor.
1	08/17/94	NA	---	NM	---	---	
1	09/18/94	NA	---	NM	---	---	
1	10/17/94	NA	---	NM	---	---	
1	11/21/94	NA	---	NM	---	---	
1	12/19/94	NA	---	NM	---	---	
1	01/18/95	NA	---	NM	---	---	
1	02/21/95	NA	---	NM	---	---	
1	03/21/95	NA	---	NM	---	---	
1	04/19/95	NA	---	NM	---	---	
1	05/19/95	NA	---	NM	---	---	
1	07/17/95	NA	---	NM	---	---	
1	08/22/95	NA	---	NM	---	---	
1	09/22/95	NA	---	NM	---	---	
1	11/20/95	NA	---	NM	---	---	
1	12/01/95	NA	---	NM	---	---	
1	12/19/95	NA	---	NM	---	---	
1	01/19/96	NA	---	NM	---	---	
1	02/20/96	NA	---	NM	---	---	
1	03/19/96	NA	---	NM	---	---	
1	04/19/96	NA	---	NM	---	---	

10000

TOLS005338

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
2	08/11/93	11:53	27.92	15.95 (3)	16.64	....	
2	10/26/93	14:28	27.92	18.12 (3)	15.11	....	
2	11/17/93	14:12	27.92	18.53 (3)	14.82	....	
2	12/17/93	13:46	27.92	17.48 (3)	15.56	....	
2	01/17/94	13:47	27.92	18.30 (3)	18.39	....	
	02/18/94	14:48	27.92	15.93 (3)	16.66	....	
	03/18/94	13:24	27.92	14.45 (3)	17.70	....	
2	04/18/94	15:02	27.92	14.80 (3)	17.45	....	
2	05/18/94	15:38	27.92	15.54 (3)	16.93	....	
2	06/17/94	15:25	27.92	16.23 (3)	16.44	....	
2	07/19/94	09:49	27.92	17.08 (3)	15.86	....	
2	08/17/94	08:00	27.92	17.80 (3)	15.33	....	
2	09/16/94	07:55	27.92	18.33 (3)	14.96	....	
2	10/17/94	09:20	27.92	18.90 (3)	14.56	....	
2	11/21/94	12:20	27.92	16.95 (3)	15.93	....	
2	12/19/94	11:36	27.92	14.80 (3)	17.45	....	
2	01/18/95	11:42	27.92	12.38 (3)	19.17	....	
2	02/21/95	13:48	27.92	11.00 (3)	20.14	....	
2	03/21/95	13:17	27.92	11.40 (3)	19.86	....	
2	04/19/95	13:08	27.92	12.44 (3)	19.12	....	
2	05/19/95	13:47	27.92	13.37 (3)	18.47	....	
2	07/17/95	14:10	27.92	15.21 (3)	17.16	....	
2	08/22/95	08:10	27.92	16.42 (3)	16.31	....	
2	09/22/95	08:57	27.92	17.30 (3)	15.69	....	
2	11/20/95	08:20	27.92	16.55 (3)	16.22	....	
2	12/01/95	08:46	27.92	15.00 (3)	17.31	....	
2	12/18/95	07:48	27.92	12.04 (3)	19.41	....	
	01/19/96	09:02	27.92	11.21 (3)	19.99	....	
	02/20/96	11:10	27.92	2.47 (3)	26.17	....	
2	03/19/96	09:38	27.92	5.70 (3)	23.69	....	
2	04/19/96	12:08	27.92	9.27 (3)	21.37	....	

Area flooded during 2/9/96 flood event

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TOLS005339

Table 2-i  
 Summary of Water Level Measurements  
 Time Oil Co., NW Terminal  
 Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
3	08/11/93	12:03	28.07	15.40 (3)	17.18	....	
3	10/28/93	14:28	28.07	18.30 (3)	15.13	....	
3	11/17/93	14:14	28.07	18.30 (3)	15.13	....	
3	12/17/93	13:52	28.07	16.67 (3)	16.28	....	
3	01/17/94	13:50	28.07	15.98 (3)	16.78	....	
3	02/18/94	14:49	28.07	16.27 (3)	16.57	....	
3	03/18/94	13:26	28.07	14.63 (3)	17.73	....	
3	04/18/94	15:04	28.07	13.47 (3)	18.55	....	
3	05/18/94	15:39	28.07	15.75 (3)	16.93	....	
3	06/17/94	15:26	28.07	15.95 (3)	16.79	....	
3	07/19/94	09:50	28.07	16.12 (3)	16.67	....	
3	08/17/94	08:02	28.07	16.68 (3)	16.28	....	
3	09/16/94	07:56	28.07	16.85 (3)	16.16	....	
3	10/17/94	09:21	28.07	16.74 (3)	16.23	....	
3	11/21/94	12:21	28.07	16.70 (3)	16.26	....	
3	12/19/94	11:37	28.07	14.57 (3)	17.77	....	
3	01/18/95	11:43	28.07	12.58 (3)	19.17	....	
3	02/21/95	13:49	28.07	11.14 (3)	20.18	....	
3	03/21/95	13:18	28.07	11.55 (3)	19.90	....	
3	04/19/95	13:09	28.07	12.72 (3)	19.08	....	
3	05/19/95	13:48	28.07	13.54 (3)	18.50	....	
3	07/17/95	14:11	28.07	15.56 (3)	17.07	....	
3	08/22/95	08:11	28.07	16.70 (3)	16.28	....	
3	09/22/95	08:59	28.07	16.70 (3)	16.26	....	
3	11/20/95	08:21	28.07	16.52 (3)	16.39	....	
3	12/01/95	08:57	28.07	15.33 (3)	17.23	....	
3	12/19/95	07:49	28.07	12.20 (3)	19.44	....	
3	01/19/96	09:03	28.07	11.33 (3)	20.06	....	
3	02/20/96	11:10	28.07	2.53 (3)	26.28	....	
3	03/19/96	09:40	28.07	5.71 (3)	24.03	....	
3	04/19/96	12:09	28.07	9.38 (3)	21.45	....	

Area flooded during 2/9/96 flood event

10000

TOLS005340

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
<b>Deep Wells:</b>							
B2	08/11/93	10:02	30.31	25.44	4.87	---	
B2	10/26/93	13:32	30.31	25.25	5.06	---	
B2	11/17/93	13:32	30.31	25.23	5.08	---	
B2	12/17/93	12:59	30.31	23.88	6.43	---	
B2	01/17/94	13:12	30.31	23.99	6.32	---	
B2	02/18/94	14:20	30.31	23.73	6.58	---	
B2	03/18/94	12:59	30.31	23.15	7.16	---	
B2	04/18/94	14:42	30.31	24.35	5.98	---	
B2	05/18/94	15:22	30.31	23.12	7.19	---	
B2	06/17/94	14:54	30.31	22.90	7.41	---	
B2	07/19/94	09:20	30.31	24.38	5.93	---	
B2	08/17/94	07:35	30.31	25.22	5.09	---	
B2	09/16/94	07:27	30.31	25.89	4.42	---	
B2	10/17/94	09:03	30.31	25.43	4.88	---	
B2	11/21/94	11:51	30.31	24.56	5.75	---	
B2	12/19/94	11:10	30.31	21.82	8.49	---	
B2	01/18/95	11:18	30.31	18.93	11.38	---	
B2	02/21/95	13:23	30.31	17.12	13.19	---	
B2	03/21/95	13:05	30.31	20.37	9.94	---	
B2	04/19/95	12:48	30.31	21.21	9.10	---	
B2	05/19/95	13:38	30.31	19.30	11.01	---	
B2	07/17/95	13:55	30.31	22.72	7.59	---	
B2	08/22/95	07:53	30.31	24.42	5.89	---	
B2	09/22/95	08:28	30.31	25.28	5.03	---	
B2	11/20/95	07:57	30.31	22.02	8.29	---	
B2	12/01/95	08:29	30.31	13.63	16.68	---	
B2	12/19/95	07:26	30.31	15.57	14.74	---	
B2	01/19/96	08:38	30.31	16.48	13.83	---	
B2	02/20/96	10:42	30.31	10.63	19.68	---	
B2	03/19/96	09:23	30.31	16.61	13.70	---	
B2	04/19/96	11:53	30.31	16.20	14.11	---	

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TOLS005341

Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
G1A	08/11/93	09:18	29.72	24.19	5.53	....	
G1A	10/26/93	13:22	29.72	25.47	4.25	....	
G1A	11/17/93	13:26	29.72	24.63	5.09	....	
G1A	12/17/93	12:51	29.72	23.32	6.40	....	
G1A	01/17/94	13:05	29.72	23.22	6.50	....	
G1A	02/18/94	14:15	29.72	23.09	6.63	....	
G1A	03/18/94	12:52	29.72	22.42	7.30	....	
G1A	04/18/94	14:38	29.72	23.42	6.30	....	
G1A	05/18/94	15:18	29.72	22.24	7.48	....	
G1A	06/17/94	14:49	29.72	22.20	7.52	....	
G1A	07/18/94	09:14	29.72	23.65	6.07	....	
G1A	08/17/94	07:30	29.72	24.60	5.12	....	
G1A	09/16/94	07:33	29.72	25.33	4.39	....	
G1A	10/17/94	09:00	29.72	24.90	4.82	....	
G1A	11/21/94	11:47	29.72	23.85	5.87	....	
G1A	12/19/94	11:03	29.72	21.33	8.39	....	
G1A	01/18/95	11:09	29.72	18.29	11.43	....	
G1A	02/21/95	13:19	29.72	18.59	13.13	....	
G1A	03/21/95	13:01	29.72	19.63	10.09	....	
G1A	04/19/95	12:43	29.72	25.90	3.82	....	
G1A	05/19/95	13:30	29.72	18.65	11.07	....	
G1A	07/17/95	13:52	29.72	20.70	9.02	....	
G1A	08/22/95	07:49	29.72	23.69	6.03	....	
G1A	09/22/95	08:23	29.72	24.61	5.11	....	
G1A	11/20/95	07:53	29.72	21.65	8.07	....	
G1A	12/01/95	08:26	29.72	13.91	15.81	....	
G1A	12/19/95	07:17	29.72	14.46	15.26	....	
G1A	01/19/96	08:34	29.72	15.95	13.77	....	
G1A	02/20/96	10:38	29.72	9.72	20.00	....	
G1A	03/19/96	09:19	29.72	15.50	14.22	....	
G1A	04/19/96	11:48	29.72	15.71	14.01	....	

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TOLS005342

Table 2-1  
 Summary of Water Level Measurements  
 Time Oil Co., NW Terminal  
 Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
J2	08/11/93	11:15	29.65	24.85	4.80	....	
J2	10/26/93	13:40	29.65	25.58	4.07	....	
J2	11/17/93	13:37	29.65	24.59	5.06	....	
J2	12/17/93	13:06	29.65	23.24	6.41	....	
J2	01/17/94	13:17	29.65	23.38	6.29	....	
J2	02/18/94	14:25	29.65	23.10	6.55	....	
2	03/18/94	13:05	29.65	22.50	7.15	....	
J2	04/18/94	14:45	29.65	23.72	5.93	....	
J2	05/18/94	15:24	29.65	22.47	7.18	....	
J2	06/17/94	15:00	29.65	22.27	7.38	....	
J2	07/19/94	09:25	29.65	23.74	5.91	....	
J2	08/17/94	07:40	29.65	24.60	5.05	....	
J2	09/16/94	07:40	29.65	25.22	4.43	....	
J2	10/17/94	09:06	29.65	24.77	4.88	....	
J2	11/21/94	11:58	29.65	23.92	5.73	....	
J2	12/19/94	11:16	29.65	21.15	8.50	....	
J2	01/18/95	11:23	29.65	18.27	11.38	....	
J2	02/21/95	13:28	29.65	16.45	13.20	....	
J2	03/21/95	13:07	29.65	19.72	9.93	....	
J2	04/19/95	12:52	29.65	20.55	9.10	....	
J2	05/19/95	13:42	29.65	16.65	11.00	....	
J2	07/17/95	13:58	29.65	22.10	7.55	....	
J2	08/22/95	07:57	29.65	23.79	5.86	....	
J2	09/22/95	08:34	29.65	24.65	5.00	....	
J2	11/20/95	08:03	29.65	21.40	8.25	....	
J2	12/01/95	08:32	29.65	12.90	16.75	....	
J2	12/19/95	07:32	29.65	14.96	14.69	....	
2	01/18/96	08:42	29.65	15.82	13.83	....	
J2	02/20/96	10:46	29.65	9.98	19.67	....	
J2	03/19/96	09:26	29.65	15.98	13.67	....	
J2	04/19/96	11:56	29.65	15.53	14.12	....	

8/95 - Probable entry error on water level measurement form.  
 Data modified based on relationship with other wells  
 and other measurement dates. Value for 8/95 was  
 changed from DTW of 14.65 to DTW of 24.65

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Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
J3	08/11/93	11:12	29.58	24.18	5.40	—	
J3	10/26/93	13:53	29.58	24.99	4.59	—	
J3	11/17/93	13:41	29.58	24.03	5.55	—	
J3	12/17/93	13:00	29.58	22.80	6.78	—	
J3	01/17/94	13:19	29.58	22.83	6.75	—	
J3	02/18/94	14:27	29.58	22.68	6.90	—	
J3	03/18/94	13:06	29.58	22.02	7.58	—	
J3	04/18/94	14:46	29.58	23.15	6.43	—	
J3	05/18/94	15:25	29.58	22.00	7.58	—	
J3	06/17/94	15:01	29.58	21.62	7.78	—	
J3	07/19/94	09:26	29.58	23.30	6.28	—	
J3	08/17/94	07:41	29.58	24.18	5.40	—	
J3	09/16/94	07:41	29.58	24.77	4.81	—	
J3	10/17/94	09:08	29.58	24.35	5.23	—	
J3	11/21/94	11:57	29.58	23.48	6.10	—	
J3	12/19/94	11:18	29.58	20.77	8.81	—	
J3	01/18/95	11:24	29.58	17.92	11.66	—	
J3	02/21/95	13:29	29.58	16.14	13.44	—	
J3	03/21/95	13:06	29.58	19.28	10.30	—	
J3	04/19/95	12:53	29.58	20.07	9.51	—	
J3	05/19/95	13:44	29.58	18.31	11.27	—	
J3	07/17/95	13:59	29.58	21.54	8.04	—	
J3	08/22/95	07:58	29.58	23.41	6.17	—	
J3	08/22/95	08:36	29.58	24.15	5.43	—	
J3	11/20/95	08:04	29.58	21.06	8.52	—	
J3	12/01/95	08:33	29.58	13.61	15.97	—	
J3	12/19/95	07:33	29.58	14.44	15.14	—	
J3	01/19/96	08:43	29.58	15.55	14.03	—	
J3	02/20/96	10:47	29.58	9.53	20.05	—	
J3	03/19/96	09:27	29.58	15.27	14.31	—	
J3	04/19/96	11:58	29.58	15.20	14.38	—	

7/95 - Values for wells J1 and J3 appear to have been switched; probable entry error on water level measurement form. Data modified based on relationship with other wells and other measurement dates.

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Table 2-1  
**Summary of Water Level Measurements**  
**Time Oil Co., NW Terminal**  
**Portland, Oregon**

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
O	05/31/94	16:32	32.03	24.40	7.63	—	
O	06/01/94	08:21	32.03	24.45	7.58	—	
O	06/17/94	15:54	32.03	24.41	7.62	—	
O	07/19/94	10:22	32.03	25.93	6.10	—	
O	08/17/94	08:13	32.03	26.88	5.15	—	
O	09/16/94	08:03	32.03	27.57	4.46	—	
O	10/17/94	09:30	32.03	27.39	4.64	—	
O	11/21/94	12:35	32.03	25.78	6.25	—	
O	12/19/94	11:47	32.03	23.66	8.37	—	
O	01/18/95	11:52	32.03	20.48	11.55	—	
O	02/21/95	14:05	32.03	18.52	13.51	—	
O	03/21/95	13:24	32.03	22.45	9.58	—	
O	04/19/95	13:20	32.03	23.37	8.66	—	
O	05/19/95	14:09	32.03	21.36	10.67	—	
O	07/17/95	14:18	32.03	23.76	8.27	—	
O	08/22/95	08:19	32.03	25.92	6.11	—	
O	09/22/95	09:14	32.03	26.90	5.13	—	
O	11/20/95	08:32	32.03	23.81	8.22	—	
O	12/01/95	09:04	32.03	14.18	17.87	—	
O	12/19/95	08:00	32.03	15.83	16.20	—	
O	01/19/96	09:10	32.03	18.20	13.83	—	
O	02/20/96	11:20	32.03	12.01	20.02	—	
O	03/19/96	09:48	32.03	18.12	13.91	—	
O	04/19/96	12:32	32.03	18.38	13.67	—	

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Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1) (ft)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
R	05/31/94	16:50	30.47	22.88	7.59	---	
R	06/01/94	08:27	30.47	22.90	7.57	---	
R	06/17/94	16:00	30.47	22.87	7.60	---	
R	07/19/94	10:28	30.47	24.40	8.07	---	
R	08/17/94	08:15	30.47	25.37	5.10	---	
R	09/16/94	08:05	30.47	26.02	4.45	---	
R	10/17/94	09:32	30.47	25.88	4.61	---	
R	11/21/94	12:39	30.47	24.27	8.20	---	Hydrocarbon odor
R	12/19/94	11:49	30.47	22.12	8.35	---	Hydrocarbon odor
R	01/18/95	11:55	30.47	18.98	11.49	---	
R	02/21/95	14:07	30.47	17.06	13.41	---	
R	03/21/95	13:26	30.47	20.90	9.57	---	
R	04/19/95	13:22	30.47	21.81	8.66	---	
R	05/19/95	NM	30.47	NM	NM	---	
R	07/17/95	14:20	30.47	22.22	8.25	---	
R	08/22/95	08:20	30.47	24.29	8.18	---	
R	09/22/95	09:18	30.47	25.40	5.07	---	
R	11/20/95	08:34	30.47	22.25	8.22	---	
R	12/01/95	09:05	30.47	12.67	17.80	---	
R	12/19/95	08:03	30.47	14.33	16.14	---	
R	01/19/96	09:12	30.47	16.68	13.79	---	
R	02/20/96	11:21	30.47	10.48	19.99	---	
R	03/19/96	09:49	30.47	16.58	13.89	---	
R	04/19/96	12:33	30.47	16.80	13.67	---	

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**Table 2-1**  
**Summary of Water Level Measurements**  
**Time Oil Co., NW Terminal**  
**Portland, Oregon**

Well	Date	Time	Reference Elevation (1)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
<b>Other:</b>							
River Gauge	08/11/93	12:57	28.13	24.90	3.23	---	
River Gauge	10/26/93	13:17	28.13	25.27	2.86	---	
River Gauge	11/17/93	13:21	28.13	24.18	3.95	---	
River Gauge	12/17/93	12:48	28.13	22.48	5.65	---	
River Gauge	01/17/94	12:58	28.13	22.90	5.23	---	
River Gauge	02/18/94	14:10	28.13	22.30	5.83	---	
River Gauge	03/18/94	12:48	28.13	21.70	6.43	---	
River Gauge	04/18/94	14:34	28.13	23.50	4.63	---	
River Gauge	05/18/94	15:14	28.13	21.60	6.33	---	
River Gauge	06/17/94	14:45	28.13	21.32	6.81	---	
River Gauge	07/19/94	09:10	28.13	23.25	4.88	---	
River Gauge	08/17/94	07:26	28.13	24.00	4.13	---	
River Gauge	09/16/94	07:30	28.13	24.68	3.47	---	
River Gauge	10/17/94	08:58	28.13	24.10	4.03	---	
River Gauge	11/21/94	11:43	28.13	23.20	4.93	---	
River Gauge	12/19/94	10:58	28.13	19.95	8.18	---	
River Gauge	01/18/95	11:04	28.13	16.70	11.43	---	
River Gauge	02/21/95	13:14	28.13	14.65	13.48	---	
River Gauge	03/21/95	12:58	28.13	18.90	9.23	---	
River Gauge	04/19/95	12:37	28.13	19.80	8.33	---	
River Gauge	05/19/95	13:22	28.13	17.40	10.73	---	
River Gauge	07/17/95	13:48	28.13	22.00	6.13	---	
River Gauge	08/22/95	07:45	28.13	23.24	4.89	---	
River Gauge	09/22/95	08:19	28.13	24.26	3.87	---	
River Gauge	11/20/95	07:50	28.13	20.20	7.93	---	
River Gauge	12/01/95	08:23	28.13	8.45	19.68	---	
River Gauge	12/19/95	07:11	28.13	14.10	14.03	---	
River Gauge	01/19/96	08:29	28.13	14.06	14.07	---	
River Gauge	02/20/96	10:36	28.13	8.00	20.13	---	
River Gauge	03/19/96	09:15	28.13	15.95	12.18	---	
River Gauge	04/19/96	11:45	28.13	13.95	14.18	---	

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Table 2-1  
Summary of Water Level Measurements  
Time Oil Co., NW Terminal  
Portland, Oregon

Well	Date	Time	Reference Elevation (1) (ft)	DTW(2) (ft)	GW Elevation	LNAPL Thickness (ft)	NOTES
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**Notes:**

NM Not measured.

-- No measurable product or odor observed.

• Well Point

(1) Reference Elevation (Ref. Elev) is the north side of the top of the 1.25, 2 or 4-in well casing, except for Wells 1, 2, and 3.  
At Wells 1, 2, and 3, the reference elevation is the invert of the 4-in well casing. Ref. Elev. survey was conducted on August 23, 1993 by Zarosinski-Tatone Engineers, Inc.; Portland, Oregon. For the river gauge, the reference elevation was measured at a marked location on the south side of the dock on the Willamette River.

(2) Depth to water (DTW) measured from surveyed reference elevation [see note (1)].

(3) To determine the groundwater elevation for angled wells, depth to water measurements were adjusted to vertical distances. The depth to water value shown is the actual, unadjusted measurement.

### 3.0 DATA GAPS

Phases I and II of the RI will focus on addressing specific data gaps regarding the former PCP mixing area and the former Crosby & Overton tank area that were identified in the review of information from previous facility investigations. It is anticipated that the information collected during the RI will provide a sufficient basis to evaluate and identify risks for the EA and remedial action alternatives during the FS process. Previous investigations provided important but limited information regarding the nature of the subsurface hydrogeology and the occurrence of contamination at the facility; therefore, certain issues important in the evaluation of any further remedial action remain unresolved. The RI will address the following data gaps related to the former PCP mixing area and the former Crosby & Overton tank area:

- The types and levels of contamination within the soil stockpile for determination of the appropriate remedial action
- The nature and lateral extent of the confining layer between the upper and lower water-bearing zones in and downgradient of the Phase II areas
- The predominant flow directions in each of the water-bearing zones, and the extent to which seasonal factors significantly influence groundwater flow at the site
- Hydraulic connection between groundwater and the Willamette River and other surface water bodies within a 1-mile radius of the facility
- Whether nonaqueous phase contamination exists
- Whether PCP is the primary constituent of concern for the former PCP mixing area, or whether carrier and additive chemicals used in the former mixing operations also are present in soil and/or water at concentrations of concern
- Site-specific values for the aquifer properties that influence contaminant transport rates
- The lateral and vertical extent of contamination in unexcavated soil and in groundwater
- Current and future use of the facility and surrounding property
- Existing ecological conditions at and surrounding the facility.

The RI field program described in this work plan has been designed to obtain data to evaluate these issues.

## 4.0 REMEDIAL INVESTIGATION

The overall objective of the RI is to collect data sufficient to characterize the nature and extent of contamination from releases during former facility operations for use in determining appropriate exposure scenarios for the EA and evaluating remedial alternatives during the FS process. The RI data will supplement data collected during previous investigations (see Section 2.4). The field sampling plan (FSP) to be followed during RI soil and groundwater sampling, drilling, and well installation activities is provided in Appendix A. Quality assurance/quality control (QA/QC) procedures to be followed during this investigation are outlined in the quality assurance project plan (QAPP) in Appendix B. Health and safety procedures to be used during field activities are provided in the health and safety plan in Appendix C.

As discussed previously, the RI will be conducted in three phases. The Phase I RI will characterize the soil excavated from the former PCP mixing area that is stockpiled in an covered and lined area to the southwest of the former PCP mixing area (Figure 2-3). The Phase II RI will address any remaining *in situ* soil and groundwater contamination associated with the former PCP mixing area and the former Crosby & Overton tank area. The Phase III RI will address the extent of any soil and groundwater contamination associated with other historical operations of the Northwest Terminal (e.g., tank farm areas and loading rack) and, if determined necessary based on the Phase II RI results, the potential for impacts from contamination from the former PCP mixing area on surface water and sediments in the Willamette River.

This section presents the scope of work and planned activities for the Phase I and Phase II RI investigations. A work plan for the Phase III RI will be submitted for DEQ review and approval following completion of the Phase II RI.

### 4.1 PHASE I RI

The purpose of the Phase I investigation is to characterize the nature of contamination within the soil stockpile. The following sections identify the soil stockpile sample locations and sample collection and analysis techniques.

#### 4.1.1 SOIL STOCKPILE SAMPLE LOCATIONS

The scope of Phase I RI field activities will include collection of soil samples at ten randomly generated locations within ten rectangular grids. Each soil sample location within each grid will

be determined through the random generation of (X,Y) coordinates, as defined in the EPA guidance document *Methods for Evaluating the Attainment of Cleanup Standards* (EPA 1989). The random sample location method is described in Section 4.2.1.2. The approximate outline of the grids is shown on Figure 4-1.

According to Time Oil records, the soil within the stockpile was segregated by size during excavation from the former PCP mixing area; a small area on the northwest side of the stockpile contains the coarser material. The soil samples will only be collected from the finer-grained portion of the stockpile. The larger-size material is expected to consist mainly of gravel, and likely will not be sampled for chemical analysis because, on a mass per unit weight basis, contamination is not expected to be significant. If material other than gravel (e.g., solid PCP) is observed within the coarser material during field activities, sampling of the coarser material will be reconsidered.

#### 4.1.2 SOIL SAMPLE COLLECTION AND ANALYSIS

Soil samples will be collected using a hand auger or a similar method, as necessary. At each location, the soil samples will be collected continuously from the surface to the base of the stockpile and composited into a single sample. The soil samples will be analyzed for the following constituents: semivolatiles, volatiles, chlorinated phenols, TPH-HCID and/or TPH-D, and priority pollutant (PP) metals. Dioxin/furan analyses also will be conducted on the two soil samples that contain the most elevated PCP concentrations. The soil sample numbers and chemical constituents are provided in Table 4-1. Soil sample collection techniques are discussed in more detail in Appendix A.

### 4.2 PHASE II RI

The Phase II RI will evaluate remaining *in situ* soil and groundwater contamination associated with the former PCP mixing area and the former Crosby & Overton tank area. The scope of the Phase II RI field program includes the following planned activities.

- Conducting an initial groundwater sampling event at selected wells (including wells O and R in the west tank farm area) at the beginning of Phase II to aid in identifying permanent Phase II monitoring well locations. The groundwater will be analyzed using immunoassay field screening methods for PCP and TPH.
- Sampling and analyzing soil in the former PCP mixing area, the former Crosby & Overton tank area, beneath the former PCP warehouse floor, and in other areas associated with the former PCP mixing operation where current information or

descriptions of previous activities suggest the potential for contamination. Soil samples for geologic/hydrogeologic characterization also will be collected from these areas.

- Redeveloping existing monitoring wells at the beginning of Phase II for future groundwater sampling.
- Abandoning three damaged existing wells (wells I, E, and 1). Existing well points will be retained for water level measurements only.
- Installing new monitoring wells and sampling and analyzing groundwater in areas downgradient of previously identified soil or groundwater contamination associated with the former PCP mixing area and former Crosby & Overton area and where previous hydrogeologic characterization is determined to be insufficient.
- Measuring water levels in monitoring wells and the Willamette River to evaluate groundwater flow directions, vertical gradients between the upper and lower water-bearing zones, and the relationship of the water-bearing zones to the river.
- Conducting aquifer tests in selected monitoring wells to evaluate aquifer properties and potential contamination migration pathways.
- Conducting a beneficial well use survey to determine the current and future beneficial use of groundwater at the facility and within a 1-mile radius of the terminal (east of the Willamette River).
- Sampling and analyzing dust on structural support members (e.g., beams, sills, rafters) within the PCP warehouse.
- Conducting a survey of all measurement points so that the field measurements can be confidently evaluated and compared, and the extent of contamination can be accurately evaluated.

Figure 4-2 identifies approximate locations for the soil samples to be collected during the Phase II RI. Figure 4-3 identifies the initial groundwater sampling locations, and Figure 4-4 identifies the existing and proposed monitoring wells to be sampled during the Phase II RI. Table 4-2 describes the Phase II sampling program and rationale.

The following sections describe the soil and groundwater investigations to be conducted for the Phase II RI. A more detailed description of the field activities and sampling procedures are provided in the FSP (Appendix A). QA/QC procedures to be followed during these activities are discussed in the QAPP (Appendix B). The health and safety plan for the field activities is contained in Appendix C.

#### 4.2.1 SOIL INVESTIGATION

The Phase II RI soil sampling activities will be sequenced in a progressive series of data collection events. The purpose of the sequencing will be to determine appropriate analytical parameters for the Phase II RI random soil samples and groundwater samples (biased and random soil sample locations are discussed in the following section). If early analytical results indicate that soil contamination is limited to a small group of constituents, the full suite of analyses outlined for Phases I and II will not be necessary to characterize contamination at the facility. Therefore, based on the early analytical results, some of the analyses may be dropped for subsequent samples. In making this decision, consideration will be given to the representative nature of the early results (i.e., vertical and lateral distribution).

The appropriate list of analyses for the later Phase II soil and groundwater samples will be determined using both the Phase I soil results, which will include a comprehensive set of analytical parameters (see Section 4.1.2), and screening analysis results from the biased soil samples to be collected early during the Phase II RI. These soil sample results will be evaluated to determine the final list of analytical methods for the remaining Phase II soil and groundwater samples using the sequence of events presented below:

- 1) Analyze Phase I soil stockpile samples for semivolatiles, volatiles, chlorinated phenols, TPH-HCID and/or TPH-D, and PP metals.
- 2) During the Phase II RI, collect soil samples at biased locations (identified in Section 4.2.1.1 and in Table 4-2) in the former PCP mixing area, the former Crosby & Overton tank area, beneath the former PCP warehouse floor, and north and west of the former PCP warehouse. Screen these samples for PCP, PCBs (Crosby & Overton area, only) and TPH-D using an immunoassay field screening method.
- 3) Based on the screening results, send a subset of samples with the highest concentrations for each analyte to the analytical laboratory for analysis for other constituents (semivolatiles, metals, and volatiles) and for confirmation of the screening results. (The results of at least 5 percent of the total number of samples analyzed using the screening method will be confirmed at the analytical laboratory, of which at least 2 percent will represent medium to nondetected concentrations.)
- 4) Based on the Phase I results and the biased sample screening results, determine the constituent list for the remaining Phase II soil samples and groundwater samples. The criteria for including the constituent will be that greater than 5 percent of the total number of soil samples contain the constituent at detected concentrations or the constituent is present at concentrations exceeding background (for metals). These criteria are the same as those used for the EA evaluations.

- 5) Based on the biased sample screening results, also determine whether additional samples should be collected for analysis at greater depths at these locations for delineation of the vertical extent of contamination. Field screening will be conducted at all biased soil sample locations until low level or undetected concentrations are found. Screening data collected using a photoionization detector (e.g., Microtip) also may be used to help determine whether samples will be collected for analysis or to evaluate whether the vertical extent of contamination has been defined.

The following sections describe the soil sampling locations within the former PCP mixing area, the former Crosby & Overton tank area, and in and near the former PCP warehouse, and summarize the soil sample collection procedures and soil sample analyses.

#### 4.2.1.1 Soil Sample Locations

Soil samples will be collected from either biased or random locations. Biased locations refer to areas where soil contamination is suspected based on results from previous investigations or knowledge of historical facility operations, or where soil data are limited and additional characterization would benefit the EA and FS. Biased sample results will be used to determine the level of contamination in areas where concentrations for the constituents of concern may be elevated. The biased sample results also will be used to determine the appropriate analyses of the subsequent random soil and groundwater samples.

Random soil samples will be used to identify the lateral and vertical distribution of contamination remaining in former remedial action areas following excavation. Random sample results will be used to provide a data set that represents the average properties of the soil for use in the EA and FS and to fulfill the data quality objectives of sample accuracy and precision. Random samples will be collected from randomly generated locations within grids established within the former PCP mixing area and the former Crosby & Overton tank area. The method for determining the random sample location within each grid will be based on EPA's random sample determination method described in Section 4.2.1.2. Statistical guidance to be used in the evaluation of the random sample results will include Chapter 9 of *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846* (EPA 1986, updated 1995), DEQ's *Soil Cleanup Manual* (DEQ 1994), or EPA guidance (EPA 1989a).

The following sections describe the rationale for the soil sample locations within the former PCP mixing area, the former Crosby & Overton tank area, and in and adjacent to the former PCP warehouse and provide a summary of soil sampling techniques and sample analyses. This

information is also summarized in Table 4-3. A more detailed description of the soil sampling techniques is provided in the FSP (Appendix A).

#### *Former PCP Mixing Area*

Within or adjacent to the former PCP mixing area, soil samples will be collected from one biased location where, based on a review of previous site data, PCP contamination is suspected to exist, as well as from five random locations. The biased soil sample (LB1) will be located to the south of the former PCP warehouse, at the termination of the rail line, outside of the area previously excavated.

The five random samples will be collected where soil was previously excavated within the former PCP mixing area. Each of the five random samples (LB8 through LB12) will be collected at a single location within each of the five rectangular grids, as shown on Figure 4-2. If any random sample is within about 10 ft of a biased sample location or a new monitoring well location, the random sample will be relocated to provide more evenly distributed data. The soil sample depth intervals are discussed in Section 4.2.1.3.

#### *Former Crosby & Overton Tank Area*

Soil samples will be collected from six biased locations within the former Crosby & Overton tank area where contamination associated with the tanks or the former PCP mixing area is suspected to exist, as well as from eight random sample locations. The biased soil sample locations (LB2 through LB7) include:

- Two locations (LB2 and LB3) south/southeast of the 1989 excavation limits for the former PCP mixing area, where contamination is suspected to exist based on sidewall samples collected from the excavation
- One location (LB4) south/southeast of the 1989 excavation limits, along the product pipelines, where elevated PCP and PCB concentrations were previously reported. LB4 is also adjacent to old storage tank 38009
- One location (LB5) adjacent to the sump at the northeast corner of the soil stockpile area where contamination was previously reported
- Two locations (LB6 and LB7) along the product pipelines for former tank 10002 where elevated concentrations of PCBs are suspected.

The eight random samples will be collected within the tank area, including an area in the southeast corner where soil contaminated with PCBs was excavated in 1989. Each of the random samples (LB16 through LB23) will be collected at a single location within each of the eight rectangular grids, as shown on Figure 4-2. The random sample will be relocated if the randomly generated location is within about 10 ft of a biased sample location or a new monitoring well location, or if obstructed by facility equipment. The soil sample depth intervals are included in Section 4.2.1.3 and Table 4-3.

#### *Former PCP Warehouse*

Soil samples will be collected from three biased locations within the interior of the warehouse and at four biased locations outside the warehouse. Inside the warehouse, soil samples of the foundation fill and just below the fill (LB8 through LB10) will be collected from the approximate areas where historical PCP mixing operations reportedly occurred and where high concentrations of PCP were previously detected in soil samples collected below the foundation fill and near the angled wells (Figure 4-2).

Four soil samples will be collected from areas to the north and west of the warehouse where previous documentation indicates that contamination is most likely to occur. The samples (LS1 through LS4; Figure 4-2) will be collected from surface soil at depths about 0 to 6 inches BGS within two areas not previously sampled near the former PCP loading dock and north and west of the former PCP warehouse. Deeper samples also will be collected at two of the four locations, but will be archived until the analysis results for the surface samples can be evaluated (Table 4-3).

At least two dust samples will be collected from the structural support members (e.g., beams, sills, rafters) within the former PCP warehouse. To the extent possible, the dust samples will be collected from areas where the emptying of bags containing PCP occurred, reportedly near the southwest corner of the warehouse.

#### **4.2.1.2 Random Sample Determination Method**

Random sample locations within each sampling grid established in the former PCP mixing area and former Crosby & Overton tank area will be determined through the random generation of (X,Y) coordinates, as defined in Section 5.2 of the EPA guidance document *Methods for Evaluating the Attainment of Cleanup Standards* (EPA 1989a). To determine these (X,Y) coordinates, each grid will be assigned a range of X and Y coordinates (X<sub>min</sub> to X<sub>max</sub>, Y<sub>min</sub> to Y<sub>max</sub>). Each range of coordinates will define a rectangle that circumscribes the entire grid area, with X<sub>min</sub>, Y<sub>min</sub> defining

the lower lefthand corner and Xmax and/or Ymax defined by the length of the longest axis, as described below:

The X-axis will be measured in the horizontal (left to right) direction with Xmin equal to 0 and always located at the left end of the X-axis; and Xmax equal to the horizontal length of the rectangle and always located at the right end of the X-axis.

The Y-axis will be measured in the vertical (bottom to top) direction with Ymin equal to 0 and always located at the lower end of the Y-axis; and Ymax equal to the vertical length of the rectangle and always located at the upper end of the Y-axis.

The (X,Y) coordinates for describing the random soil sample location within each grid will be generated using the range of X and Y coordinates defined above, a random number generator (a Hewlett Packard calculator, or equivalent), and the following equations:

- 1)  $X = X_{\text{min}} + (X_{\text{max}} - X_{\text{min}}) * \text{RND}$
- 2)  $Y = Y_{\text{min}} + (Y_{\text{max}} - Y_{\text{min}}) * \text{RND}$

where RND is the random number between 0 and 1 generated for each X and Y coordinate.

If (X,Y) is outside the grid area, calculations using equations 1 and 2 will be repeated using new randomly generated numbers between 0 and 1 until the (X,Y) coordinates fall within the grid area. Each coordinate, X and Y, will be rounded to the nearest  $\frac{1}{2}$ -ft for measuring distances in the field.

#### 4.2.1.3 Soil Sample Collection

Phase II RI soil boring samples will be collected using a hollow-stem auger drill rig, designed for limited access, or by hand digging holes for surface soil samples (0-6 inches BGS). At the soil boring locations, soil will be collected for lithologic logging purposes at 2.5-ft intervals or at significant changes in lithology (whichever is smaller). Continuous lithologic sampling will be conducted throughout the depth interval where the confining unit is expected, where the presence of dense nonaqueous phase liquids (DNAPL) is considered most likely, and within the native material where not previously sampled in the former PCP mixing area (see Table 4-3). The total depth of the soil sample borings will extend slightly into the confining layer, which is anticipated to be about 15 to 20 ft BGS. The presence or absence of DNAPL will be evaluated during drilling of the soil borings associated with the former PCP mixing area. (A description of the technique for field evaluation of DNAPL is included in Appendix A.) If the presence of DNAPL is confirmed, the need for additional monitoring points downgradient of this area will be evaluated in consultation

with DEQ. Chemical analysis (screening, full analytical scan, or both) will be conducted on soil samples from the borings from the following depth intervals, at a minimum:

- 0 to 6 inches BGS. At locations within the excavation boundaries of the former PCP mixing area, the backfill extends from 4 to 12 ft BGS. At soil sample locations in this area, the first sample will be collected near the base of the 1989 excavation or below the base of the backfill (where identifiable), except at two locations. At these two locations (likely to be random samples collected from grids 2 and 3), samples will be collected within the excavation backfill to determine whether any contamination has impacted the backfill since its placement. At locations where the 1989 excavation coincides with the water table, the first depth interval will not be collected.
- Near the water table surface of the upper water-bearing zone (or, where it is possible to identify, within the zone of seasonal water table fluctuation).
- At the base of the upper water-bearing zone (near the contact with the underlying interbedded confining layer, where present).

These depth intervals for chemical analysis may be modified based on subsurface conditions observed at the time of drilling (i.e., visible contamination, unexpected change in lithology, screening results, etc.) Groundwater samples from the borehole also may be collected during drilling if field observations suggest that additional data are necessary to define the extent of contamination. Sample collection procedures are provided in Appendix A.

Surface soil samples will be collected from two locations within each surface soil sampling area (LS1 through LS4) at a depth interval of 0 to 6 inches BGS or below any fill layer at the surface. (Note that the north surface sample area historically may have been covered with road fill and/or asphalt; if field observations confirm this, samples will be collected below this layer, or from cracks in the layer. Additional samples also will be collected at depth at each of these locations and placed on hold pending the results of screening analyses of the surface samples. If the screening analysis results for the surface samples indicate elevated concentrations of PCP or TPH (see Section 4.2.1), selected samples collected at depth will be analyzed and additional sampling locations may be identified.

#### 4.2.1.4 Soil Sample Analysis

As discussed in Section 4.2.1, the Phase II RI biased soil samples initially will be analyzed using immunoassay field screening methods for PCP (EPA Method 4010), TPH (draft EPA Method 4030), and PCBs (draft EPA Method 4020) (in the Crosby & Overton tank area only). As noted

earlier, these results along with the results of the Phase I soil stockpile analyses will be used to determine the final list of analytical methods for the remaining Phase II soil and groundwater samples. The final list of analyses may include semivolatiles, chlorinated phenols (including PCP and tetrachlorophenol), TPH, volatiles, PCBs, and PP metals. Selected soil samples (approximately four samples) may also be analyzed for dioxins/furans.

The dust samples from the former PCP warehouse will be analyzed at the analytical laboratory for PCP only (modified EPA Method 8040).

For the semivolatiles and volatiles, the laboratory will be required to report the first ten TICs, to aid in the identification of carrier or additive compounds. Further descriptions of the soil analytical program are provided in Table 4-1 and in Appendix B.

#### 4.2.2 GROUNDWATER INVESTIGATION

The Phase II RI groundwater investigation will focus on evaluating the lateral and vertical extent of groundwater contamination resulting from activities associated with the former PCP mixing area and warehouse and the former Crosby & Overton tank area and the potential for contaminant migration. The groundwater investigation will include the following activities:

- Redeveloping existing monitoring wells and conducting an initial groundwater screening event at selected wells.
- Drilling and installing eight new monitoring wells (four shallow and four deep).
- Measuring water levels in existing wells, well points, new monitoring wells, and at the Willamette River.
- Sampling and analysis including:
  - soil from the new monitoring well borings
  - borehole groundwater from soil borings using well points at selected locations
  - groundwater from existing monitoring wells at the facility and from new monitoring wells, on a quarterly basis, for 1 year.
- Conducting aquifer tests within the upper and lower water-bearing zones.
- Conducting a beneficial well use survey and land use evaluation.

- Abandoning three damaged existing wells (wells I, E, and 1) and conducting a field evaluation of the construction at wells 2 and 3 to determine whether defensible water quality and water level data can be obtained at these locations or whether abandonment is advisable. Information on the existing monitoring wells also will be verified and tabulated.

These activities are described in the following sections.

Other groundwater investigation activities may be conducted following an evaluation of the data collected from the activities listed above and consultation with DEQ. These supplemental activities may include:

- Use of a drive-point method (e.g., Geoprobe) to delineate the downgradient extent of groundwater contamination if detected in most downgradient wells sampled as part of the Phase II RI
- Use of drive-point method (e.g., Geoprobe) to determine the extent of DNAPL (using an outside-in approach) if observed during drilling of soil borings or monitoring wells associated with the former PCP mixing area
- Installation of deeper monitoring wells (greater than 40 ft deep) if groundwater sample results from the deep monitoring wells which monitor the top of the lower water-bearing zone indicate elevated concentrations of constituents of concern.

If determined necessary, a supplemental work plan for these activities, which references the procedures provided in this work plan, will be submitted to DEQ for approval.

#### 4.2.2.1 Initial Groundwater Screening Event

The monitoring well locations proposed for the Phase II RI (Figure 4-4) were identified using historical groundwater sample results and the water level data collected monthly at the facility since August 1993 as part of pre-RI activities. Before the Phase II RI well installation, the water quality assumptions behind these locations will be confirmed by performing a field screening analysis of groundwater samples from selected existing monitoring wells (following redevelopment). The monitoring well locations selected for the initial groundwater screening event include wells D, H, M, J1, and 2 in the upper water-bearing zone and wells J2, G1A, R, and O in the lower water-bearing zone. These locations are shown on Figure 4-3.

Field screening analyses will be conducted for PCP and TPH using immunoassay field screening methods developed by EnSys, Inc. The PCP method (EPA Method 4010) was approved by EPA in October 1992; the draft TPH method (dated June 1992) is awaiting EPA approval. Appropriate QA/QC analyses will be followed in accordance with the methods, including analyses

of field duplicates and method blanks at 1 per 20 samples (or at least one type of QA/QC sample during the event). Also, at least 5 percent of the samples will be confirmed by the analytical laboratory.

If the initial groundwater screening results indicate that the overall objectives of the RI are not being met by the proposed Phase II RI monitoring well locations, the locations may be modified following consultation with, and approval by, DEQ. Results that may prompt modification of the Phase II RI monitoring well locations include detection of PCP or TPH in the furthest downgradient well from the former PCP mixing area or former Crosby & Overton tank area or detection of these constituents in an upgradient well.

#### 4.2.2.2 Monitoring Well Installation

Eight new monitoring wells (four shallow, upper water-bearing zone wells and four deep, lower water-bearing zone wells) will be installed at the locations shown on Figure 4-2 and listed in Table 4-2. The locations may be modified if the initial screening results (Section 4.2.2.1) indicate that the proposed locations do not meet the RI objectives. If significant modifications appear to be necessary, they will be conducted following consultation with, and approval by, DEQ. This section discusses the proposed monitoring well locations.

Four of the new wells will be installed in two clusters (one shallow well and one deep well in separate borings about 10 ft apart) and will provide information on vertical variability in chemical concentrations and groundwater gradients. One well cluster (shallow well LW1S and deep well LW1D) will be installed between the former PCP mixing area and well M, which was previously used for pumping, to identify any influence on groundwater PCP distribution due to the pumping well and to provide information on the direction of flow and water quality in the lower water-bearing zone in this area. The other well cluster (LW4S and LW4D) will be installed downgradient from the soil stockpile area.

The remaining four wells will be located in four separate areas. A single shallow well (LW2S) will be installed within the excavation area of the former PCP mixing area (the three existing angled wells do not extend to the top of the confining layer and, therefore, are not adequate for the purposes of the RI). A single deep well (LW3D) will be installed adjacent to the former PCP mixing area (forming a cluster with existing shallow well D) to provide information on the direction of flow and water quality in the lower water-bearing zone in this area. Another shallow well (LW5S) will be installed within and (seasonally) downgradient of the former Crosby & Overton tank area to

better define groundwater flow in the upper water-bearing zone in this area and to determine whether groundwater contamination exists downgradient of this area. Another deep well (well LW6D) will be installed between the former PCP mixing area and the former Crosby & Overton tank area and the Willamette River, where the confining unit is not expected to exist. This well will provide information on the lateral extent of the confining unit, the interconnection between the lower water-bearing zones and the river, and whether contamination has migrated closer to the river from these upgradient areas.

Monitoring wells will be drilled and installed in accordance with applicable Oregon Water Resources Department (OWRD) regulations (State of Oregon Administrative Rules for *Construction and Maintenance of Monitoring Wells and Other Holes*, OAR 690-240) (OWRD 1990). The drilling techniques to be used during the RI depend on the depth of the monitoring well (shallow or deep) and on soil conditions encountered during drilling. It is currently expected that the drilling methods will include hollow-stem auger or cable tool for the shallow wells and cable tool for the deep wells (as explained further below). If, during drilling, there is an indication that a well cannot be completed in the lower water-bearing zone with a reasonable level of confidence with regard to reducing the potential for cross-contamination, then the well installation will be terminated and DEQ will be notified.

Shallow wells will be completed within the upper water-bearing zone with the screened interval extending from just below or at the base of the water-bearing zone upward across the water table to a level above or approximately equaling the expected seasonal high water level. This will allow detection of both a DNAPL or a light nonaqueous phase liquid (LNAPL), if present. Based on well logs and historical site water level data, the total depths of the shallow wells are expected to range from 15 to 20 ft BGS, with screen lengths of 10 ft.

Deep wells will be completed and screened within the lower water-bearing zone. Based on previous site well logs, the deep wells are expected to extend about 35 to 40 ft BGS and will be completed with 5-ft screens to facilitate discrete detection of contamination in the lower water-bearing zone. Boreholes for the deep wells will be properly sealed between aquifers by stepping down casing size across the confining layer. To achieve proper seal and to reduce sloughing that could compromise the seal, the deep wells will be installed using cable tool drilling (unless auger drilling can be performed without compromising the integrity of the seal between the two water-bearing zones).

Following installation, all new wells will be developed by purging using a centrifugal pump or similar method. Drilling methods and well installation procedures are described in more detail in Appendix A.

#### 4.2.2.3 Water Level Measurements

Water levels will be measured in the new monitoring wells following drilling, installation, and development and before each scheduled groundwater sampling event. Water level measurements also will be collected preceding groundwater sampling events in the existing monitoring wells and well points and at the Willamette River gauge. Product thicknesses (LNAPL and DNAPL) also will be measured, if present. The procedures for measuring water levels and product thickness are provided in Appendix A.

Semicontinuous water level measurements also will be collected over a 24- to 48-hr period in, at a minimum, three shallow wells, three deep wells, and at the river to evaluate interconnections and responses between the Willamette River and the upper and lower water-bearing zones at the facility. The procedures for measuring water levels to evaluate responses to tidal fluctuations are provided in Appendix A.

The pre-RI (Section 2.6 and Table 2-1) and Phase II RI water levels will be used to evaluate the general direction of groundwater flow within each water-bearing zone, horizontal and vertical gradients and interconnections, and tidal and seasonal influences on groundwater flow.

#### 4.2.2.4 Monitoring Well Sample Collection

##### *Well Boring Soil*

At each monitoring well location, soil samples will be collected during drilling as described in Appendix A. Soil samples will be collected for lithologic purposes at 2.5-ft intervals or continuously where the confining unit is expected, where the presence of DNAPL is possible, and below the backfill material within the former PCP mixing area where no samples have been collected previously (Table 4-3). Samples from each well boring will be collected for chemical analyses (and in some cases, fate and transport analyses) at the following locations:

- 0 to 1 ft BGS, within the unsaturated zone or in the first 1-ft interval below any fill layers, if present (chemical only)
- At the water table surface (chemical, fate, and transport)
- Within (and near the top of) the confining unit (chemical, fate, and transport)

- At the top of the lower water-bearing zone (deep wells only; chemical, fate and transport).

Lithologic sampling at the base of each shallow well boring will extend a maximum of 1 to 2 ft into the underlying confining unit to verify the presence of the confining unit. Where a new shallow and deep monitoring well pair is installed, the deep well will be drilled first and soil samples for chemical analysis will be collected only from the deep well boring. Chemical and physical analyses to be conducted are described in Section 4.2.2.5, Table 4-3, and Appendix B.

#### *Groundwater*

Phase II RI groundwater samples will be collected from newly installed wells, existing monitoring wells associated with the PCP mixing area, and wells R and O located in the west tank farm area on a quarterly basis for 1 year. The first sampling event will not take place for at least 1 week after development of new wells and redevelopment of existing wells. Development and redevelopment procedures are described in Appendix A. Wells observed to be most affected by the river stage will be sampled during the last 4 hours of predicted outgoing (ebb) tides, if possible, to yield samples that are representative of groundwater discharging to the river. Groundwater sampling protocols are presented in Appendix A; groundwater analyses are described in the following section.

Groundwater samples also may be collected from selected soil boring boreholes to further delineate the extent of groundwater contamination in areas where permanent monitoring locations are not planned. Any such samples will be collected at or near the water table surface and possibly at the base of the upper water-bearing zone. The samples will be analyzed using the immunoassay field screening method for PCP and TPH. A description of the groundwater borehole sampling technique is provided in Appendix A.

#### **4.2.2.5 Monitoring Well Sample Analyses**

##### *Well Boring Soil*

Chemical analyses performed on the well boring soil samples will be based on the list of constituents determined from the Phase I soil stockpile samples and the biased Phase II RI soil samples and may include semivolatiles, chlorinated phenols (including PCP and tetrachlorophenol), total petroleum hydrocarbons (TPH), volatiles, PP metals, and PCBs (for well LW5S only). For the

semivolatiles and volatiles, the laboratory will be required to report the first 10 TICs, to aid in the identification of carrier or additive compounds. Fate and transport parameters, including grain size analysis and total organic carbon (TOC), will be analyzed for in selected soil samples collected from within the saturated zone (at or near the water table surface in the upper water-bearing zone and at or near the top of the lower aquifer) and from the confining unit. Samples from the aquitard also will be tested for vertical hydraulic conductivity. Descriptions of the soil analytical program are provided in Table 4-3 and in Appendix B.

#### *Groundwater*

Selected wells will be sampled for PCP and TPH during the initial screening event using immunoassay field screening methods developed by EnSys, Inc. (see Section 4.2.2.1). Subsequently, chemical analyses performed on groundwater samples collected during the Phase II RI quarterly events will be based on the list of constituents determined from the Phase I RI soil stockpile samples and Phase II RI biased soil samples, except for wells R and O (groundwater from wells R and O will be analyzed for volatiles and semivolatiles). Major ion and total dissolved solids analyses will be conducted on selected wells to assist in hydrogeologic characterization. A dioxin/furan analysis will be performed on the groundwater sample collected from well J1 (the well exhibiting the highest historical PCP concentration). The need to analyze other groundwater samples for dioxins and furans will be assessed after evaluation of the first quarter sampling round results from well J1. Metal analyses will be conducted to determine the total (unfiltered) concentrations in the groundwater. Dissolved (field filtered) analyses also may be conducted if total concentrations are thought to be impacted by groundwater characteristics (e.g., turbidity).

Based on the results of the first two quarterly groundwater sampling events, the list of analytical parameters may be modified; if so, the modification will be conducted following consultation with DEQ. Further descriptions of the groundwater analytical program are provided in Table 4-4 and in Appendix B.

#### **4.2.2.6 Aquifer Testing**

Aquifer testing will be conducted to provide estimates of aquifer properties for input to RI and EA evaluations of contaminant fate and transport and to evaluate the interconnection between the upper and lower water-bearing zones. Aquifer testing methods will initially include variable head (slug) tests to estimate aquifer properties. Pumping tests will be conducted following

evaluation of the results of the slug tests, the first groundwater sampling event, and the boring data results from the confining layer to refine the initial aquifer properties estimates.

The slug tests will be conducted following installation of the new monitoring wells. It is anticipated that two to four slug tests (one or two each in the upper and lower water-bearing zones) will be performed. The information collected will be used to calculate an estimate of the *in situ* hydraulic conductivity of the water-bearing strata.

As noted previously, pumping tests will be performed after the first quarter groundwater sampling data are received and evaluated. This will allow identification of optimal location(s) for the tests, and will decrease the chance of unintentional contaminant transport laterally, or between the upper and lower water-bearing zones. Procedures for conducting aquifer tests and measuring water levels are provided in Appendix A.

#### 4.2.2.7 Beneficial Well Use Survey

A beneficial well use survey will be conducted to identify the current and likely future beneficial use of groundwater at and adjacent to the facility and to identify any potential receptors of contamination that may have originated from the facility (for use during the EA). The survey will include a well inventory of active and inactive wells, where possible, within a 1-mile radius of the facility on the east side of the Willamette River (aquifers on the west side of the Willamette River are unlikely to be connected to those at the facility because of the depth of the river and the difference in the geologic units) and an evaluation of the relationship of groundwater at the facility with neighboring surface water bodies.

The well inventory will include, as necessary:

- Evaluation of well logs listed with the Oregon Water Resources Department
- Evaluation of currently available hydrogeologic documents (including studies conducted on the west side of the Willamette River to confirm the basis for excluding that area)
- Field confirmation of the location and current use of any municipal and domestic supply wells
- Collection of pertinent information about the wells, as available, including: owner, address, map location, date drilled, well construction data, static water level, and current water use.

The relationship between groundwater from the facility and neighboring surface water bodies will be evaluated in conjunction with the environmental evaluation for the EA (see Section 5.2). Groundwater flow from the facility will be evaluated to determine whether local surface water bodies, such as the Willamette River, Ramsey Lake and adjacent wetlands, and the Columbia Slough, are considered to be environmental receptors.

#### **4.2.2.8 Abandonment of Existing Damaged Wells**

Two shallow monitoring wells (well 1 and I) and one well point (well E), installed in 1985 or 1986, have been damaged by truck traffic or other activities at the facility. Because of the current damaged condition of these wells, they are unsuitable for use as monitoring points and will be abandoned during Phase II RI activities in accordance with Oregon State regulations (OWRD 1990). A field evaluation also will be conducted of the construction and integrity of wells 2 and 3 (e.g., integrity of surface seals, actual angle of construction, and presence of sand pack) to determine whether defensible water quality and water level data can be obtained at these locations or whether abandonment is advisable.

Abandonment will be performed using the procedures described in Appendix A.

### **4.3 HANDLING OF INVESTIGATION-DERIVED WASTES**

Investigation-derived wastes, such as water and soil cuttings generated during drilling activities, water purged from the wells during development sampling and aquifer testing, waste decontamination liquids, and solid residuals (e.g., Tyvek, gloves, etc.) will be collected and stored in a temporary staging area at the facility until proper disposal methods are determined. Decontamination fluids containing decontamination solvents will be stored separately. These investigation-derived wastes will be disposed of appropriately, in a manner consistent with the analytical results and in accordance with local, state, and federal regulations.

### **4.4 TOPOGRAPHIC SURVEY**

A vertical and horizontal survey will be conducted by a licensed land surveyor to determine and map the locations and elevations of each existing and newly installed monitoring well and well point. Soil boring locations or other facility features also may be surveyed, if determined necessary. The survey information will include northing and easting coordinates, existing surface elevations, and elevations for water level measurement reference points (generally the top of the well casing).

The survey will be referenced to a USGS benchmark, and previous surveys conducted at the facility. The results of the survey will be translated to spreadsheets and maps used during the RI, EA, and FS.

#### **4.5 QUALITY ASSURANCE/QUALITY CONTROL**

The RI data will be used to determine appropriate exposure scenarios for the EA and to support development of appropriate remedial alternatives for the FS. Therefore, the RI data must be collected in a manner that both provides for, and documents, an acceptable level of precision and accuracy. A quality assurance/quality control (QA/QC) program designed to provide the necessary level of precision and accuracy, as well as completeness, representativeness, and comparability is outlined in detail in Appendix B. The QA/QC program includes, among other things, identification of data quality objectives, specific QA/QC procedures for sample collection and handling, analytical protocols for the analytical laboratories, the use of QC samples, and data validation procedures.

#### **4.6 DATA EVALUATION AND MANAGEMENT**

Data collected during the RI will be used to address the objectives of the investigation presented in Section 4.0. These data will be incorporated into a RI database and will be used to develop a facility conceptual model, including aspects of physical characteristics, the nature and extent of contamination, and contaminant fate and transport. Data from the RI will be used as the basis for the EA and FS. These evaluations are discussed briefly in the following paragraphs.

**Scaled Base Map.** A scaled base map of the facility will be prepared. This map will be digitized from land surveys (relative to a USGS benchmark) and used for presentation and interpretation of data, such as location of important facility features, location of monitoring wells and other investigation activities, and plotting of contaminant distributions and groundwater elevation contours.

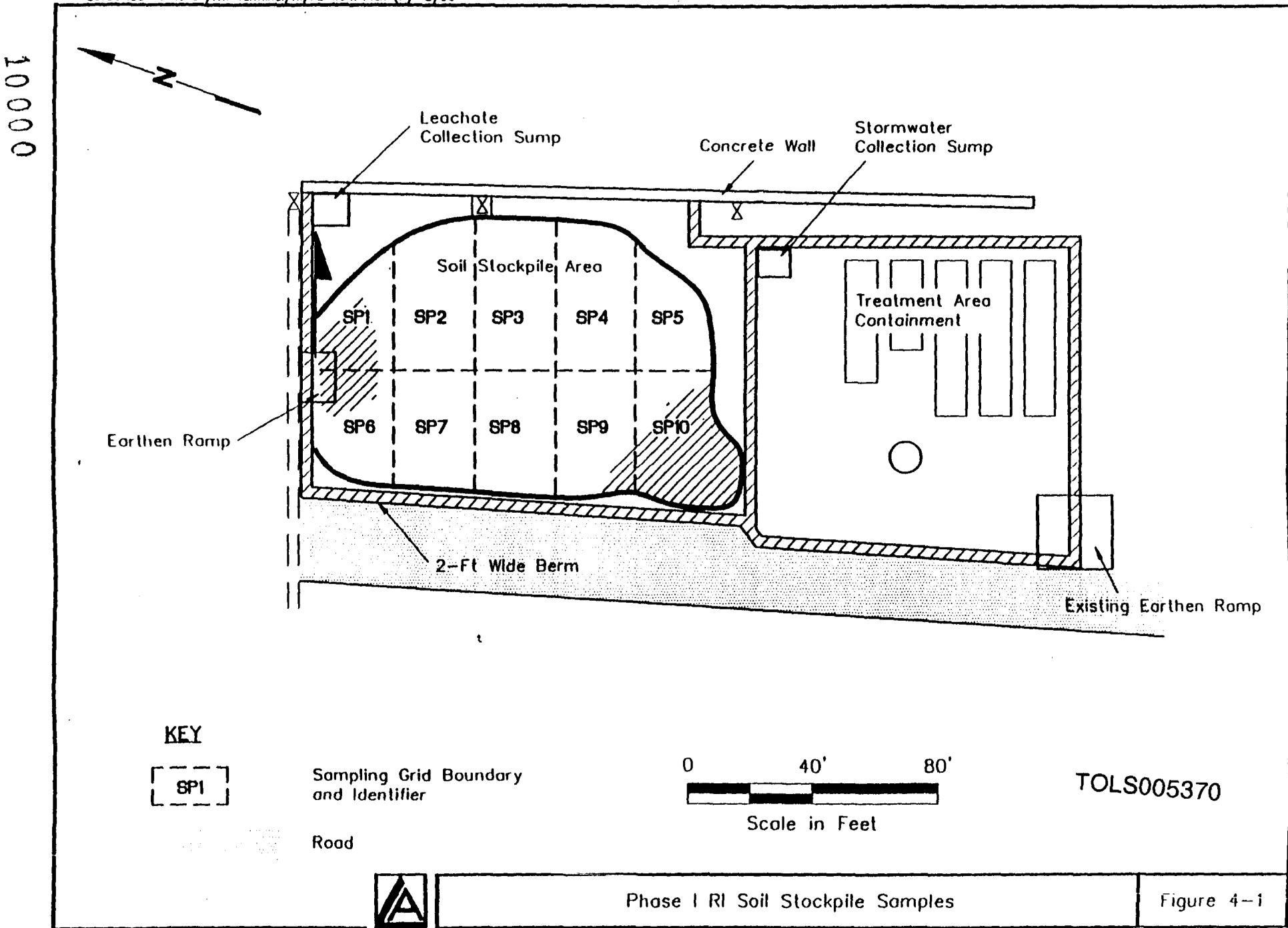
**Facility Physical Characteristics.** Physical characteristics of the facility and vicinity, including topography, geology, and hydrogeology will be evaluated. Data from boring logs and soil boring samples will be used to develop a facility conceptual model.

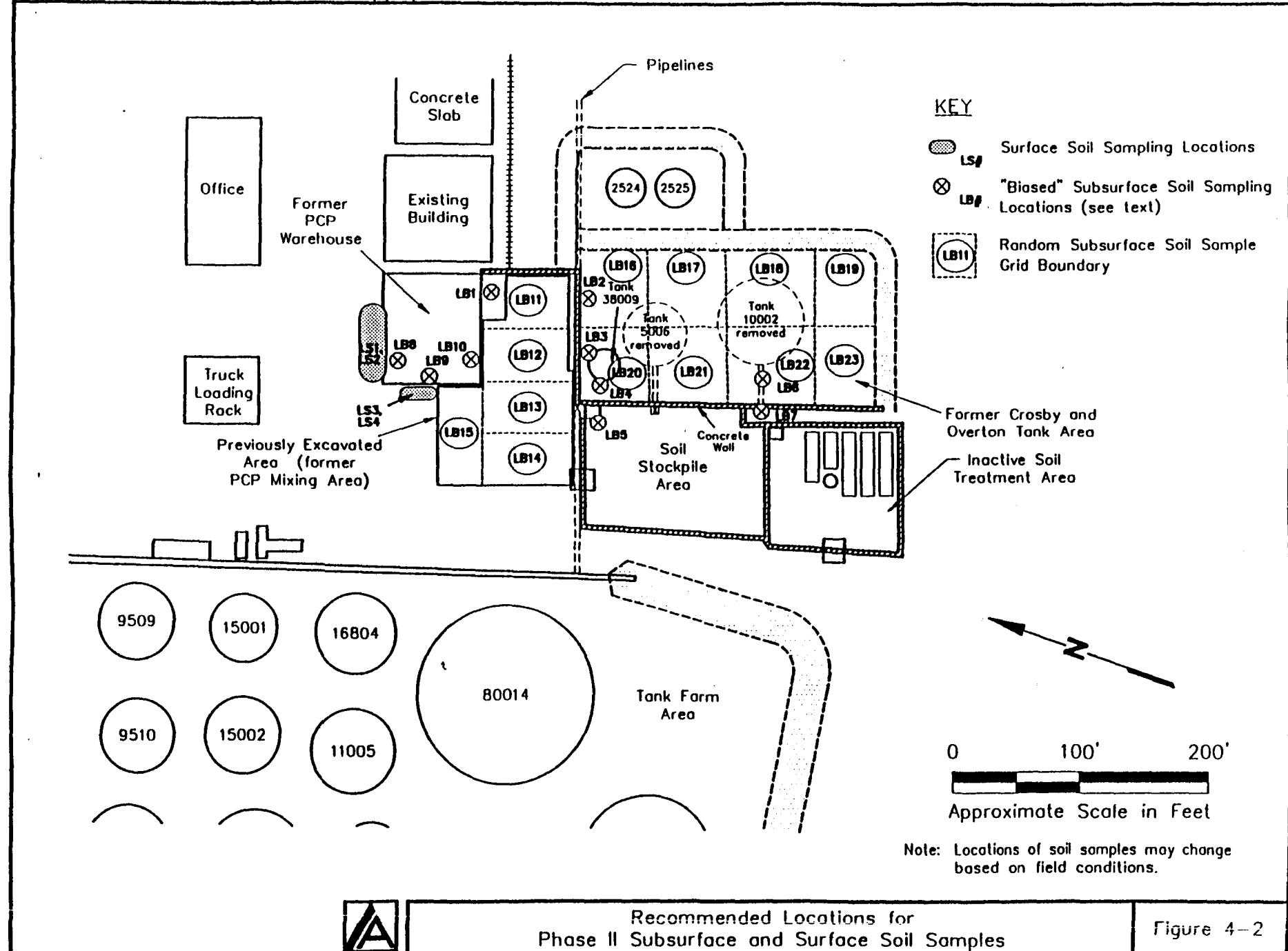
**Nature and Extent of Contamination.** Constituent concentration data will be incorporated into the conceptual model to evaluate the nature and extent of contamination in soil and groundwater at the facility. Relevant RI data and other information will be presented on

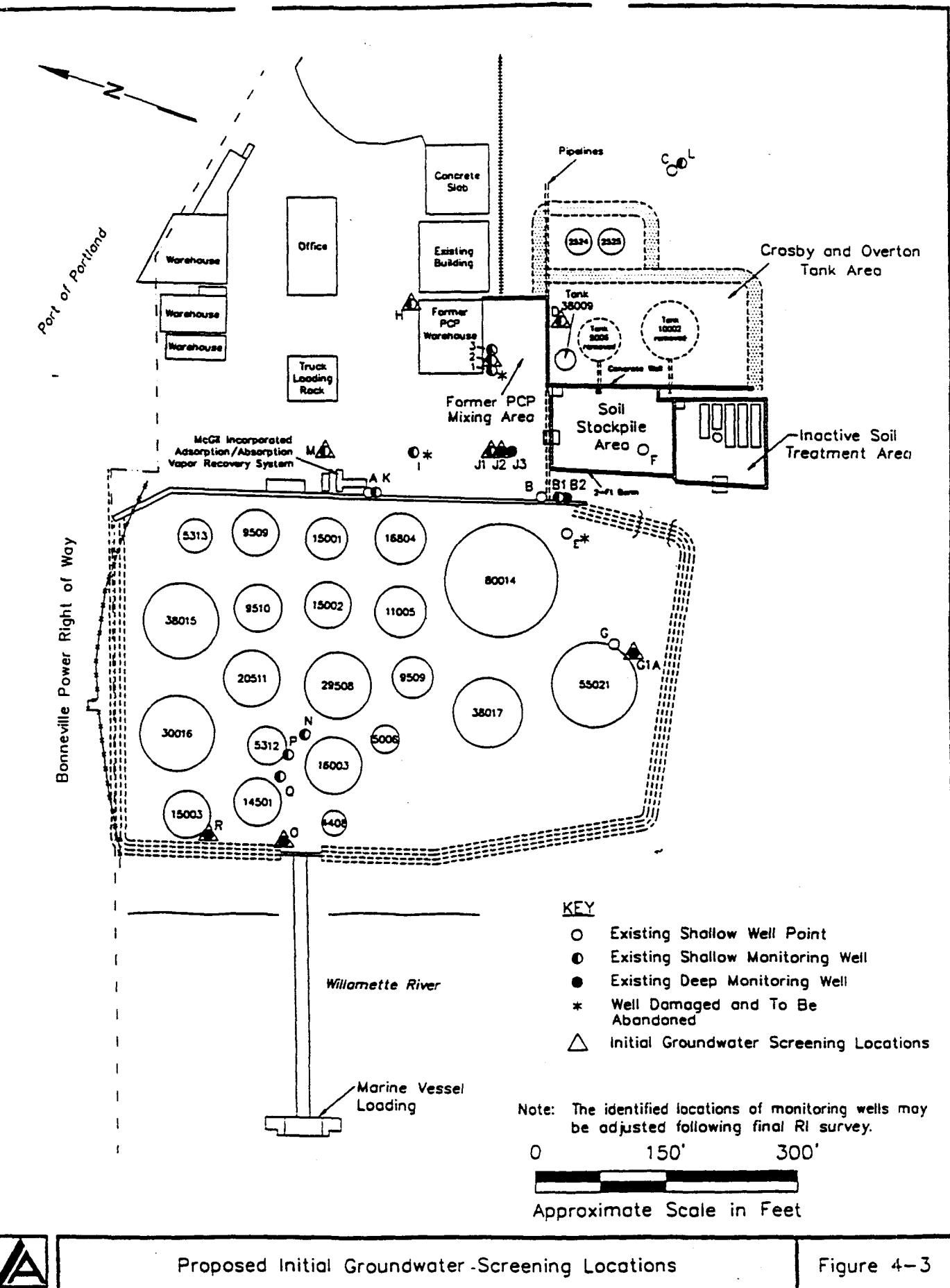
concentration contours maps, on cross-sections, and in tabular format, where appropriate. Spatial and temporal trends in groundwater constituent levels also will be evaluated.

**Contaminant Fate and Transport.** Results from analyses of historical facility operations, nature and extent of contamination, and physical site characteristics will be used to refine the conceptual model. This model will aid in evaluating current and future fate and transport characteristics.

**Endangerment Assessment.** Data collected during each phase of the RI will be used to perform an EA, including human health and environmental evaluations. These evaluations are discussed in detail in Section 5.0.





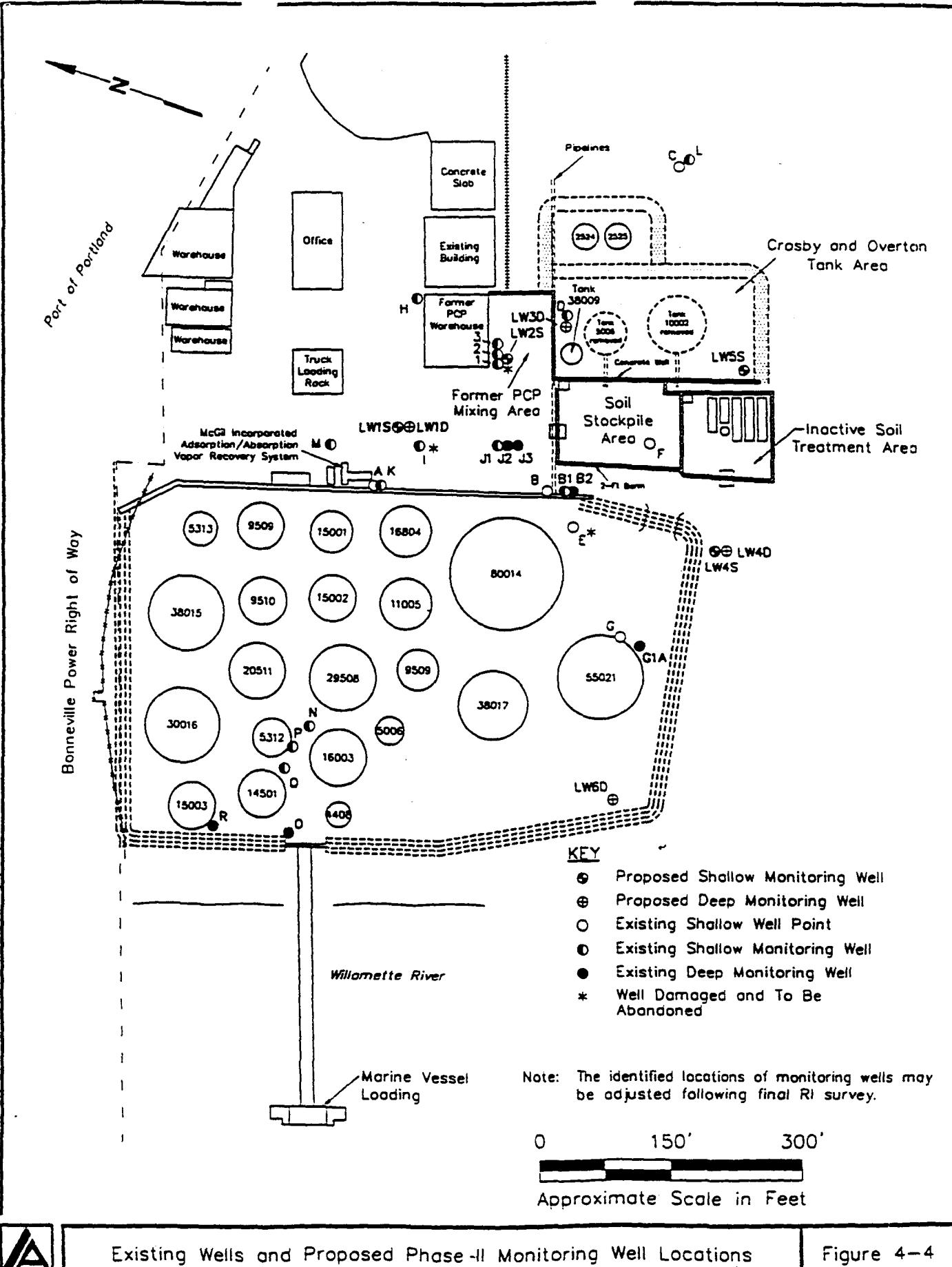
**A**

Proposed Initial Groundwater -Screening Locations

Figure 4-3

10000

TOLS005372

**A**

Existing Wells and Proposed Phase-II Monitoring Well Locations

Figure 4-4

10000

TOLS005373

TABLE 4-1  
SOIL STOCKPILE SAMPLE LOCATIONS AND ANALYSES<sup>(a)</sup>  
PHASE I REMEDIAL INVESTIGATION

Grid	Sample Number	Planned Chemical Analyses <sup>(b)</sup>					
		Semivolatiles (EPA Method 8270) <sup>(c)</sup>	Volatiles (EPA Method 8260) <sup>(c)</sup>	Chlorinated Phenols (Modified EPA Method 8040)	(TPH-HCID and/or TPH-D)	Priority Pollutant Metals (EPA Method 6010/7000)	Dioxin/ Furan <sup>(d)</sup> (EPA Method 8290)
SP1	LSP1	✓	✓	✓	✓	✓	✓
SP2	LSP2	✓	✓	✓	✓	✓	✓
SP3	LSP3	✓	✓	✓	✓	✓	✓
SP4	LSP4	✓	✓	✓	✓	✓	✓
SP5	LSP5	✓	✓	✓	✓	✓	✓
SP6	LSP6	✓	✓	✓	✓	✓	✓
SP7	LSP7	✓	✓	✓	✓	✓	✓
SP8	LSP8	✓	✓	✓	✓	✓	✓
SP9	LSP9	✓	✓	✓	✓	✓	✓
SP10	LSP10	✓	✓	✓	✓	✓	✓

- (a) Sample locations within each grid will be determined using the random sample determination method (EPA 1989a; see Section 4.2.1.2). At each location, soil samples will be collected continuously from the surface to the base of the stockpile and composited into a single sample.
- (b) Source: EPA (1986, updated 1995).
- (c) Plus first ten tentatively identified compounds (TICs).
- (d) Dioxin/furan analyses will be conducted on the two soil samples that contain the most elevated PCP concentrations; the locations indicated in this table may change based on analytical results.

TABLE 4-2

**SOIL SAMPLE AND MONITORING WELL LOCATIONS AND RATIONALE<sup>(a)</sup>**  
**TIME OIL CO. PHASE II REMEDIAL INVESTIGATION**  
**PORTLAND, OREGON**

Location <sup>(b)</sup>			Rationale
<b>Borings</b>			
<b>Biased Locations</b>			
LB1		At termination of rail line; inside former PCP mixing area but outside excavation area	To evaluate remaining level of contamination in soil outside of excavation area
LB2-LB4		South of PCP excavation and in Crosby & Overton tank area, near pipelines and old storage tanks	To evaluate lateral and vertical extent of contamination from the former PCP mixing area and the level of contamination in areas where spills reportedly occurred or had potential to occur.
LB6-LB7			
LB5		Adjacent to sump at northwest corner of soil stockpile area	To evaluate level of contamination in an area where previous investigations reported elevated concentrations of PCP.
LB8-LB10		Underneath former PCP warehouse floor	To evaluate level of contamination within and directly below foundation fill under the PCP warehouse floor.
<b>Random Locations</b>			
LB11-LB16		Inside and adjacent to PCP excavation	To evaluate the lateral and vertical extent and average properties of contamination remaining in the former PCP mixing area following excavation.
LB17-LB24		Inside Crosby & Overton tank area	To evaluate the lateral and vertical extent and average properties of contamination remaining in the former Crosby & Overton tank area.
<b>Surface Soil</b>			
LS1		Along former PCP warehouse loading dock	To investigate potential soil contamination
LS2		Along southwest side of former PCP warehouse	To investigate potential soil contamination
<b>Wells</b>			
LW1S	Shallow	Between source area and former pumping Well M	To evaluate influence in contaminant migration due to previous pumping at Well M; to provide information on vertical gradients and vertical variability in concentration.
LW1D	Deep	Between source area and former pumping Well M; forms a cluster with new Well LW1S	To provide information on vertical gradients and vertical variability in concentration.
LW2S	Shallow	Within the former PCP mixing area	To provide information on groundwater contamination or presence of LNAPL or DNAPL in a known source area
LW3D	Deep	Forms cluster with Well D	To provide vertical gradient data and lower zone quality data.
LW4S	Shallow	West of soil stockpile	To provide downgradient data from the PCP mixing area (seasonally) and the soil stockpile area.
LW4D	Deep	West of soil stockpile; forms a cluster with new well LW4S	To provide downgradient data from the PCP mixing area (seasonally) and the soil stockpile area.
LW5S	Shallow	Within Crosby & Overton tank area	To provide information from Crosby & Overton tank area.
LW6D	Deep	Between former PCP mixing area and Crosby & Overton tank area and the river	To provide information between PCP mixing area, Crosby & Overton tank area, and the river; to provide lower zone quality data in area where confining unit may not be present.

- (a) Sample depths/screened intervals and sample analyses are provided in Table 4-3.
- (b) Monitoring locations may change based on conditions encountered in the field and initial groundwater sampling screening results.

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TABLE 4-3  
PLANNED SOIL SAMPLE DEPTHS AND ANALYSES  
PHASE II REMEDIAL INVESTIGATION

Location	Total Depth			Soil Sample Depth				Chemical Analyses <sup>(a)</sup>						Fate and Transport Analyses												
	1-2 ft Into Confining Layer	4-10 ft into Lower Zone	1-2 ft into Native Material	Lithologic	Confidence Within Confining Unit	Confidence for DNAPL	0-6 inches SOS	Below Base of IR	New Water Table	Base of Upper Zone	Confining Unit	Top of Lower Zone	Within IR	Hold Driller Surface	Saturations	Volatile	Chlorinated Phenols	TPH	Polymer Pollutant Metals	PCB	Dichlorofuran	Field Screening	% Grain Size	% Total Organic Carbon	% K of Confining Unit	
<b>Borings; Biased</b>																										
LB1	x				x		x		x	x													x <sup>b</sup>	x <sup>b</sup>		
LB2-LB7	x			x	x		x	x	x	x													x <sup>b</sup>			
LB8-LB10		x	x				x							x									x <sup>b</sup>			
<b>Borings; Random</b>																										
LB11, LB14, LB15	x			x	x	x	x	x	x	x			x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>						
LB12-LB13	x			x	x	x	x	x	x	x			x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>			
LB17-LB19, LB21-LB23	x			x	x	x	x	x	x	x			x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x		
LB16, LB20	x		x	x	x	x	x	x	x	x			x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x		
<b>Surface Soil</b>																										
LS1, LS3	x				x		x		x	x			x										x <sup>b</sup>			
LS2, LS4		x		x			x						x										x <sup>b</sup>			
<b>Wells</b>																										
LW1S	x				x	x																	x	x		
LW1D		x		x	x	x	x	x	x	x			x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>			x		
LW2S	x				x				x	x	x		x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	
LW3D		x		x	x	x	x	x	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	x
LW4S	x			x	x	x																	x	x		
LW4D		x			x		x		x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x		
LW5S	x			x	x	x	x	x	x	x			x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	
LW6D	x			x	x	x	x <sup>b</sup>	x	x	x	x	x	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x <sup>b</sup>	x	x	x <sup>b</sup>

(a) Collection of soil samples for chemical analysis will be sequential. Phase I RI soil stochastic samples and immunoassay field screening results for the Phase II RI biased soil samples will be used to determine the list of chemical parameters for the remaining Phase II soil and groundwater samples.

(b) Grain size and total organic carbon analyses will be conducted on saturated zone samples only.

(c) K = vertical hydraulic conductivity.

(d) Samples with the two highest concentrations of PCB, TPH, and PCBs, using the immunoassay technique will be sent to the laboratory for semivolatiles, volatiles, chlorinated phenols, TPH, polyaromatic hydrocarbons (PAH) metals, and PCBs. Five percent of the samples (including the two highest concentration samples) will be sent to the laboratory for confirmation analyses and will include samples having nondetect to medium range immunoassay concentrations.

(e) Performance of analyses contingent on results from Phase I RI soil samples and Phase II RI biased soil samples (see note (d)).

(f) The locations for any additional downcut/furan analysis will be determined based on field observations and the field screening results for PCB.

(g) The confining unit may not be present at this location.

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TABLE 4-4

Monitoring Location				Initial Screening	Quarterly Chemical Analyses <sup>(a)</sup>							
	Shallow Well	Shallow Well Point	Deep Well		PCP and TPH	Semivolatiles	Volatiles	Chlorinated Phenols	TPH-D	Dioxin/ Furan <sup>(b)</sup>	Priority Pollutant Metals	Major Ions
1 <sup>(c)</sup>	✓	-	-	-	-	-	-	-	-	-	-	-
2	✓	-	-	-	✓	-	-	-	-	-	-	-
3	✓	-	-	-	-	-	-	-	-	-	-	-
A	-	✓	-	-	-	-	-	-	-	-	-	-
B	-	✓	-	-	-	-	-	-	-	-	-	-
B1	✓	-	-	-	-	✓	✓	✓	✓	-	✓	✓
B2	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓
C	-	✓	-	-	-	-	-	-	-	-	-	-
D	✓	-	-	-	✓ <sup>(d)</sup>	✓	✓	✓	✓	-	✓	✓
E <sup>(e)</sup>	-	✓	-	-	-	-	-	-	-	-	-	-
G	-	✓	-	-	-	-	-	-	-	-	-	-
G1A	✓	-	-	-	✓	✓	✓	✓	✓	-	✓	✓
H	✓	-	-	-	✓	✓	✓	✓	✓	-	✓	✓
I <sup>(f)</sup>	✓	-	-	-	-	-	-	-	-	-	-	-
J1	✓	-	-	-	✓	✓	✓	✓	✓	✓	✓	✓
J2	-	-	✓	-	✓	✓	✓	✓	✓	-	✓	✓
J3	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓
K	✓	-	-	-	-	✓	✓	✓	✓	-	✓	✓
L	✓	-	-	-	-	✓	✓	✓	✓	-	✓	✓
M	✓	-	-	-	-	✓	✓	✓	✓	-	✓	✓
N	✓	-	-	-	-	-	-	-	-	-	-	-
O	-	-	✓	-	✓	✓	✓	-	-	-	-	-
P	✓	-	-	-	-	-	-	-	-	-	-	-
Q	✓	-	-	-	-	-	-	-	-	-	-	-
R	-	-	✓	-	✓	✓	✓	-	-	-	-	-
LW1S	✓	-	-	-	-	✓	✓	✓	✓	-	✓	✓
LW1D	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓
LW2S	✓	-	-	✓	-	✓	✓	✓	✓	-	✓	✓
LW3D	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓
LW4S	✓	-	-	✓	-	✓	✓	✓	✓	-	✓	✓
LW4D	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓
LW5S	✓	-	-	✓	-	✓	✓	✓	✓	-	✓	✓
LW6D	-	-	✓	-	-	✓	✓	✓	✓	-	✓	✓

(a) The list of constituents may be modified based on Phase I RI soil stockpile results and Phase II RI biased soil results.

(b) The well locations for any additional dioxin/furan analyses will be determined following the first groundwater sampling event.

**(c) Scheduled to be abandoned**

(d) Initial screening at this location also will include PCB screening analysis.

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## 5.0 ENDANGERMENT ASSESSMENT

An EA, consistent with OAR 340-122-080, will be conducted as part of the RI/FS. The OAR relies on EPA guidance for performing risk assessments. EPA guidance (including EPA 1989b,c; 1991a,b,c; and 1992), will be followed when conducting the EA. In addition, the EA will be consistent with the risk assessment provisions set forth in the Oregon Environmental Cleanup Law amendment, HB 3352. Under OAR and EPA guidance, the EA is considered a baseline risk assessment in which potential adverse effects to humans and ecological receptors caused by hazardous substances released from a site in the absence of any actions to control or mitigate these releases are evaluated and quantified. As discussed below, certain phases of the Time Oil EA will deviate from this basic definition, although the protocols for baseline risk assessment will be generally carried through the assessment.

Like the RI, the EA will be conducted in three phases. Phase I will address the stockpiled soil that was excavated from the former PCP mixing area. Due to the presumption of treatment for the stockpiled soil by DEQ (DEQ 1995), risks associated with Phase I media will be addressed through development of preliminary remediation goals (PRGs), using the general protocols for conducting EAs. The PRGs will be established for constituents of concern at concentrations that protect against unacceptable risk to exposure.

The Phase II EA will address environmental media (e.g., *in situ* soil and groundwater) that are identified during the Phase II RI as containing contaminants associated with the former PCP mixing area and the former Crosby & Overton tank area. The Phase II EA is expected to be conducted as a baseline risk assessment; however, if the RI and preliminary screening step in the EA (discussed below) suggest that remediation is clearly necessary, PRGs rather than risk estimates will be determined for the media of concern. If necessary, a Phase III EA will be conducted to address environmental media that are identified during the Phase III RI as containing contaminants associated with other facility areas (e.g., tank farm areas and loading rack). Also, if necessary, a Phase III EA would address surface water and sediments if the Phase II or III RIs suggest significant adverse impact to these media from the facility. Results from each phase of the EA will be used in the development of remedial action objectives during the FS process.

The following sections describe the tools and methods to be used for conducting baseline risk assessments or developing PRGs during each EA phase. Both human health and environmental receptors will be evaluated during each phase. Although each EA will follow the

same basic methodology, the scope of each EA will reflect the nature and complexity of the media of concern for each phase.

## 5.1 HUMAN HEALTH EVALUATION

The human health evaluation will be composed of four distinct, but interrelated elements:

- Data evaluation and identification of chemicals of concern (COCs)
- Exposure assessment
- Toxicity assessment
- Risk characterization.

In the Phase I EA, the risk characterization component will be streamlined to develop PRGs corresponding to values that are protective of potentially exposed human populations. Similarly, the risk characterization step in the Phase II EA will be streamlined if the RI and EA COC screening steps indicate that selection of a remedy requiring remediation during the FS is likely. The approach and preliminary information for the four human health risk assessment elements, as well as the environmental evaluations, are presented in the following sections.

### 5.1.1 DATA EVALUATION AND IDENTIFICATION OF COCS

Previous facility investigations indicate that the medium of concern for the Phase I EA is the stockpiled soil and the media of concern for the Phase II EA are *in situ* soil and groundwater within the former PCP mixing area and the Crosby & Overton tank area. Groundwater is not considered a medium of concern in Phase I because the stockpile is covered and lined to prevent migration of constituents to subsurface soil and groundwater. Data on media collected during the Phase I and II RIs and previous investigations will be compiled and evaluated to identify the chemicals potentially posing a threat to human health and the environment (i.e., COCs). The frequency of detection and chemical toxicity of detected compounds will provide the basis for identifying COCs for each phase. Compounds that are not detected in more than 5 percent of the samples of any one medium, or are detected below natural background (for metals), will be eliminated from further evaluation in the EA. Maximum concentrations of the resulting initial COCs will be compared to risk-based screening levels for each medium. These levels will be established using EPA standard default exposure assumptions for both human and environmental receptors (i.e., wildlife) and

conservative target risk and exposure levels (e.g.,  $1 \times 10^{-6}$  for cancer risk). COCs will be confirmed as those constituents with maximum concentrations exceeding these screening levels. Constituents with maximum concentrations not exceeding these screening levels will be eliminated from further consideration. This process will help limit the number of chemicals to be carried through the EA to those posing the significant risks at the facility. The COC screening process is designed to be conservative so that chemicals posing significant human health risk are not eliminated. Data summaries of the identified COCs will be prepared showing the data used in the EA and the qualifiers assigned during data validation review, as well as summary statistics (e.g., range of detected values, frequency of detect, arithmetic mean concentration, and range of detection limits).

### 5.1.2 EXPOSURE ASSESSMENT

Exposure scenarios used to develop PRGs or estimate facility risks will be selected based on potential receptors identified both onsite and offsite. Figure 5-1 illustrates the preliminary conceptual human exposure model, based on available site information. Preliminary information characterizing the facility and surrounding area suggests that, because the site is located in an industrial area, current potential human receptors for both the Phase I and II EAs include onsite and offsite workers (exposed via ingestion, inhalation, and dermal contact with contaminants in soil or dust). Groundwater is not currently being used for onsite purposes; therefore, there are no known onsite or offsite receptors exposed to constituents in groundwater. During the Phase II RI, a well survey will be conducted in the surrounding area to identify any potential offsite users of local groundwater. In addition, the Phase II or Phase III RI will provide information to determine whether significant adverse impacts to surface water and sediments (in the Willamette River, Columbia Slough and adjacent wetlands, lakes, and ponds) are occurring due to constituents migrating from the facility. If impacts are occurring or are likely to occur, potentially exposed populations and exposure pathways associated with these media will be identified and evaluated in the EA. Based on currently available information, the only residential area within a 1-mile radius of the facility is located on the opposite side of the Willamette River. This population is not expected to be exposed to onsite soil and groundwater. Additional information collected during the RI and the EA exposure assessment will support further refinement of the initial list of current potentially exposed populations and exposure pathways.

Potential reasonable future land use will be evaluated during Phase II using information based on current land uses of the facility and adjacent areas, onsite and offsite land use zoning,

long-term public planning, and community expectations. Preliminary information suggests that potential future land use onsite is industrial. The likely beneficial use of facility groundwater will be determined based on current uses, reasonable likely future uses, and fate and hydrogeologic data developed in the RI.

As part of each EA, exposure models will be developed for each identified exposure scenario and pathway combination. Site-specific information, along with EPA guidance, will be considered when determining appropriate exposure assumptions for the selected exposure scenarios. Exposure assumptions will include media contact rates, frequency and duration of contact, and contaminant absorption.

To estimate risks associated with Phase II, and possibly Phase III media, exposure point concentrations will be calculated using statistical analyses deemed appropriate for the particular data set. Exposure point concentrations also will be compared with facility PRGs to evaluate the magnitude of potential risks. Generally, the arithmetic mean concentration in a medium is considered an appropriate measurement of long-term exposure at a site. To address the statistical uncertainty associated with estimating the average concentrations from sample data, the 95 percent upper confidence limit on the arithmetic mean concentration for each COC is typically calculated to represent the exposure point concentration. Exposure point concentrations for surface soil will be derived to quantify exposures to current receptors. Subsurface soil exposure point concentrations will be derived to evaluate potential future exposures assuming the soil could be excavated (e.g., for construction of buildings). If exposures are expected to occur almost exclusively in a discrete area of the facility, concentrations will be averaged over the data subset best representing the exposure points (as opposed to averaging concentrations over the entire facility). Similarly, if any current use of the groundwater within a 1-mile radius of the facility is identified during the Phase II RI, exposure concentrations will be derived for either the entire aquifer or a smaller subset, as appropriate. If future groundwater use is identified during the Phase II EA, potential future groundwater exposure concentrations for the identified population of concern will be estimated based on production capabilities of the aquifer and fate and transport characteristics. Data from dust samples collected from within the former PCP warehouse during the Phase II RI will be used to derive exposure point concentrations for inhalation exposures. All data qualified as estimated during the data validation process will be included in calculations at reported values. For COCs with nondetects, one half of the reported detection limit will be used in calculations.

### **5.1.3 TOXICITY ASSESSMENT**

As part of each EA, a toxicity assessment will be conducted by compiling toxicity factors and adverse health effects for each COC. This information, combined with the exposure parameters developed in the exposure assessment, will be used to derive risk-based PRGs or estimate risks. Toxicity factors for carcinogens (cancer slope factors) and for noncarcinogens (reference doses) will be obtained from EPA's online integrated risk information system or health effects assessment summary tables. If toxicity criteria are not available for a constituent from either of these sources, the EPA Health Risk Technical Support Center in Cincinnati, Ohio will be contacted to determine if interim values are available for use, and any available interim values will be evaluated for applicability and validity.

### **5.1.4 RISK CHARACTERIZATION**

The results from the exposure and toxicity assessments will be combined to estimate risk-based PRGs for Phase I and risks for each COC in each medium of concern and exposure scenario for Phase II. The acceptable cancer risk level in Oregon's HB 3352 is  $1 \times 10^{-6}$  for individual carcinogens and hazard quotient of 1 for noncarcinogens. These risk levels will be used to estimate the PRGs unless, following discussion with DEQ, more appropriate levels for this facility are identified. These risk levels also will provide the basis from which to discuss the results of calculated risk estimates. The PRGs or risk estimates for noncarcinogenic compounds will be adjusted, as appropriate, for multiple constituent and multiple exposure pathway effects. Noncancer risks will be considered additive only if the same or similar organs and health outcomes are involved. Where PRGs are derived, exposure point concentrations will be compared to the PRGs to evaluate the magnitude and extent of potential risks posed by the COCs. A qualitative uncertainty analysis will be conducted as part of characterizing risks at the facility by addressing uncertainties associated with each step of the EA.

## **5.2 ENVIRONMENTAL EVALUATION**

The EA environmental evaluations will be conducted consistent with EPA guidance on ecological risk assessment (EPA 1995). EPA guidance recommends using the following three steps to conduct an environmental evaluation:

- Problem formulation

- Exposure and ecological effects assessment
- Risk characterization.

The problem formulation step involves identifying COCs for ecological receptors and constructing a conceptual site model to evaluate whether complete exposure pathways for ecological receptors exist. Ecological exposure pathways at the facility that are identified in the problem formulation step will be further evaluated in the exposure and ecological effects assessment by estimating exposure concentrations using data collected during the RI; identifying indicator species and any endangered, threatened, or sensitive species likely to be exposed; predicting exposure levels and bioconcentration and biomagnification factors; analyzing toxicity data and developing toxicity criteria; and estimating potential exposure and response relationships.

In the risk characterization step, estimates of wildlife exposure levels will be integrated with toxicity criteria to estimate ecological risk-based PRGs for each medium of concern in Phase I and ecological risks (or risk-based PRGs, as indicated by the RI) in Phases II and III. PRGs will be compared to estimated exposure concentrations. To quantify the magnitude or likelihood of adverse ecological effects, estimated exposure concentrations will be compared with published ecological criteria (e.g., surface water and sediment quality criteria).

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Contaminated Media	Media Interactions	Exposure Pathway	Potential Receptors					
			Potential Current			Potential Future		
			Onsite Worker	Offsite Worker	Recreational	Onsite Worker	Offsite Worker	Recreational
Soil/Dust		<ul style="list-style-type: none"> <li>→ Incidental Ingestion</li> <li>→ Dermal Contact</li> <li>→ Particulate Inhalation</li> </ul>	●	●	●	●	●	?
Soil	<ul style="list-style-type: none"> <li>Volatilization → Air</li> <li>Leaching → Groundwater</li> </ul>	<ul style="list-style-type: none"> <li>→ Inhalation</li> <li>→ Ingestion</li> <li>→ Dermal Contact</li> <li>→ Inhalation</li> </ul>	●	●		●	?	
		<ul style="list-style-type: none"> <li>Surface Water</li> <li>Sediments</li> </ul>			<ul style="list-style-type: none"> <li>→ Ingestion</li> <li>→ Dermal Contact</li> <li>→ Fish Consumption</li> </ul>	?	?	?
						?	?	?
								?

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? indicates uncertainty



## 6.0 FEASIBILITY STUDY

The objective of the FS is to develop and evaluate remedial action alternatives for contaminated media so that effective response actions may be selected for implementation. The FS will proceed with a phased approach to allow expedited evaluation, selection, and implementation of response actions for the stockpiled soil excavated from the former PCP mixing area. A Phase I FS, focused on the stockpiled soil only, will allow remedial actions for the stockpiled soil to move forward promptly so that remedial action may be implemented within the 5-year time period established by DEQ (DEQ 1995). A Phase II FS will be conducted after the Phase II RI and EA, but concurrently with the Phase I FS to the extent possible, to address environmental media affected by releases from the former PCP mixing area and the former Crosby & Overton tank area. If it is determined that onsite treatment and disposal of the stockpiled soil is an appropriate option for remediation, final selection of the remedial alternative for the Phase I FS may be delayed until information from subsequent phases of the RI can be collected and evaluated. A Phase III FS may be performed to address environmental media affected by releases from other areas of the facility (e.g., tank farm areas and loading rack) or any additional media identified during the Phase I and II RIs and EAs.

As described in the following sections, the FS process, during each phase, will:

- Develop remedial action objectives
- Delineate affected media
- Develop and evaluate general response actions, technologies, and process options
- Develop and evaluate specific remedial alternatives and recommend a preferred alternative
- Document the FS in a written report.

The FS will implement HB 3352, as described in Section 2.3.

### 6.1 REMEDIAL ACTION OBJECTIVES

As the first step in each phased FS, remedial action objectives (RAOs), consisting of medium-specific goals for protecting human health and the environment, will be developed. The RAOs will be as specific as possible, but not so specific that the range of possible remedial alternatives would

be unnecessarily limited. The RAOs will be quantitative, specifying the COCs, potential exposure pathways and receptors, and acceptable contaminant levels or range of levels for each exposure pathway, as appropriate. It is currently anticipated that the RAOs for the facility will address the following site risk issues:

- Potential for inhalation, ingestion, or direct contact with soil containing concentrations of hazardous substances above soil remediation goals
- Potential for ingestion or direct contact with groundwater containing concentrations of hazardous substances above groundwater remediation goals
- Potential for cross-media (soil-to-groundwater) transfer of hazardous substances that result in groundwater concentrations above the applicable groundwater and/or surface water remediation goals for the site.

As noted previously, available data suggest that groundwater at the facility is not a current drinking water resource and is not likely to represent a viable future drinking water source. If these conditions are confirmed during the RI and it can be demonstrated that it is unlikely that migration of contaminated groundwater will adversely affect a current or potential future drinking water source, RAOs for groundwater and cross-media transfer may need to focus only on potential impacts to the local surface water.

As the RAOs are developed, consideration will be given to the manner in which HB 3352 has amended Oregon law and policy on cleanup. With the enactment of HB 3352, Oregon law now focuses on risk of exposure rather than on concentration levels. Therefore, background levels are no longer relevant to protectiveness of a remedial action. If, however, risk-based concentrations are determined to be lower than background levels for certain constituents (i.e.; metals), background levels may be considered for protectiveness evaluations. Additionally, under HB 3352, contamination may be contained, or people and activities may be excluded from a site, effectively eliminating risk by interrupting exposure pathways. This later revision to the definition of protectiveness incorporates the concept of risk management into the process of remediation. Finally, HB 3352 states that the preference for treatment no longer applies to all contamination, only to hot spots. The changes instituted by HB 3352 are most aptly applied in the development of RAOs so that the subsequent development and analysis of remedial alternatives properly consider the effect these changes have made on the FS process.

## **6.2 AFFECTED MEDIA**

After establishing the RAOs, each FS process will continue by defining the volumes or areas of affected media that must be addressed by some remedial response action. Soil volumes will be defined by evaluating the RI data and determining the points where compliance with the RAOs are not achieved. Generally, the definition of a volume of soil will require an interpretation of available data. This interpretation will be based on best professional judgment, which may be based on a statistical analysis of the data, as appropriate. In refining soil volumes, consideration will be given to the location of the soil in relation to other physical features, such as tanks, buildings, and foundations, which may restrict application of some technologies. Consideration also will be given to the location of soil with respect to the groundwater table and whether some soil volumes might be more effectively remediated through *in situ* rather than *ex situ* technologies.

Groundwater zones that require a remedial response to achieve compliance with RAOs will be defined in a similar manner.

## **6.3 GENERAL RESPONSE ACTIONS, TECHNOLOGIES, AND PROCESS OPTIONS**

After establishing the RAOs and identifying the volume and location of affected media, general response actions will be developed to address impacted media to achieve compliance with the RAOs. As part of this process, technologies will be identified for each general response action, and process options will be developed for each technology, in accordance with Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) guidance and applicable Oregon regulations.

Based on available data, the general response actions for the various facility media are likely to include: no action, institutional controls, containment, and onsite treatment/management. However, the final selection of general response actions will depend on the RAOs, the volumes and locations of affected media, the types of contaminants to be remediated, and action-specific applicable or relevant and appropriate requirements.

Potentially applicable technology types (e.g., capping, stabilization, thermal destruction, biological destruction, etc.) and process options (e.g., asphaltic capping, fly ash/lime stabilization, pyrolysis, bioremediation, etc.) will be identified by drawing on a variety of technical resources and experiences at similar sites. For example, the presumptive remedies identified by EPA for contaminants and remedial options at wood preserving sites (EPA 1992) will be evaluated in

selecting potential remedial technologies for contaminated soil within the former PCP mixing area, from the associated stockpiled soil, and from the former Crosby & Overton tank area.

During each phase of the FS, candidate technologies and process options will be screened to reduce the number of options to be considered during development of remedial alternatives. The screening will focus on the technical and institutional implementability, effectiveness, and cost of candidate technologies and process options, and will be conducted in accordance with CERCLA requirements and applicable Oregon regulations. Implementability and effectiveness will be the primary screening criteria. Cost will be used as a basis for screening out the more expensive option(s) when less expensive but adequately protective options can be identified. Upon completion of the screening and evaluation process, at least one process option will be selected to represent a potentially viable technology in the development of remedial alternatives.

## 6.4 REMEDIAL ALTERNATIVES

### 6.4.1 DEVELOPMENT

General response actions, including the process options chosen to represent the various technology types that could be applied to treat or contain contaminated media of concern, will be combined to form proposed remedial alternatives for the volumes of media addressed. The development and screening of alternatives will be completed in accordance with OAR 340-122-080 and 340-122-090 (DEQ 1993) and applicable guidance documents.

Each alternative will be sufficiently defined to permit evaluation against certain screening criteria in an effort to reduce the number of alternatives that will undergo a more detailed comparative analysis. The description of each alternative will include the following information:

- Description of the remedial action and associated process option(s)
- Estimated time frame for implementation of the alternative and attainment of remedial action objectives
- Comparison of anticipated performance to RAOs established for the media of concern
- Technical and administrative implementability issues
- An estimate of the probable capital and long-term operation and maintenance costs (+50 percent to -30 percent).

#### **6.4.2 SCREENING**

Once technologies and process options have been assembled into remedial alternatives, the alternatives will be screened to reduce the number of alternatives carried forward to detailed analysis. Prior to screening, the scope and details of implementation for one or more of the remedial alternatives may be expanded to develop a basis for evaluating and comparing the alternatives against the screening criteria. In this regard, the volume of affected media addressed by each alternative may require refinement; the size and configuration of onsite equipment will be conceptualized; process flow rates will be evaluated and revised, if necessary; and time frames in which treatment, containment, or removal goals would possibly be achieved will be estimated.

After further defining the scope of the remedial alternatives, each alternative will be evaluated against the short- and long-term aspects of three broad criteria: effectiveness, implementability, and cost, with the purpose of the screening to reduce the number of alternatives that will undergo a more thorough and extensive analysis. The evaluation of effectiveness focuses on the degree of protection that the alternative affords to human health and the environment. The degree that an alternative reduces the toxicity, mobility, or volume of contaminants at the facility also will be considered in this analysis. The evaluation of implementability estimates the technical and administrative feasibility of constructing, operating, and maintaining a remedial action alternative. Technical feasibility refers to the ability to construct, reliably operate, and meet technology-specific regulations for process options, among other factors. The anticipated time to complete the remedial action using the technology proposed also is considered. Administrative feasibility refers to the ability to obtain the approvals for treatment, storage, and disposal services, when necessary, and the requirements for, and availability of, specific equipment and technical specialists. The cost evaluations will rely on estimates that range from +50 percent to -30 percent.

#### **6.4.3 TREATABILITY INVESTIGATIONS**

Treatability studies may be required to obtain sufficient data to allow treatment alternatives to be fully developed and evaluated during the detailed analysis of alternatives. Ultimately, these treatability studies would be used to support the remedial design of the selected alternative or to reduce cost and performance uncertainties for treatment alternatives to acceptable levels so that a remedy can be selected.

The need for treatability testing will be assessed as early in each RI/FS phase as possible. If it is determined that treatability testing is required to complete the FS evaluation, DEQ will be notified, and a treatability study work plan will be prepared and implemented.

#### 6.4.4 DETAILED ANALYSIS

The overall objective of the detailed analysis is to compare the advantages and disadvantages of the alternatives retained after screening. As a first step in the process, the description of each alternative will be further refined and the details and assumptions underlying the implementation of the alternative will be presented. In completing this work, the results of treatability testing will be incorporated to size treatment equipment, modify equipment configurations, and revise estimates for treatment time and treatment costs.

The following evaluation criteria as presented in HB 3352 will be used in the detailed analysis:

- The effectiveness of the alternative in achieving protection
- The technical and practical implementability of the alternative
- The long-term reliability of the alternative
- Any short-term risk associated with implementing the alternative posed to the community, to the remedial contractor, or to the environment
- The cost reasonableness of the alternative.

Based on the results of the comparative analysis, a preferred alternative will be recommended for implementation at the facility. The preferred alternative will be one that provides a favorable balance in satisfying the evaluation criteria, while meeting the RAOs.

## 7.0 RI/FS REPORTING

This section describes the reports to be submitted to DEQ during the RI/FS process. The results of each RI, EA, and FS phase will be submitted to DEQ in separate draft reports for review and comment. Upon receipt of DEQ's comments, Time Oil will revise and finalize each report. The reports will be prepared in accordance with the requirements specified in the VCP agreement and the OAR regulations (OAR 340-122).

### 7.1 RI REPORTS

Following validation, compilation, and evaluation of the field and laboratory data for each phase of the RI, separate RI reports will be prepared to document the findings of each phase. The report will include tabulations and discussions of the RI data compared to previously collected data; and the resulting conclusions regarding constituents of concern, the nature and extent of soil and groundwater contamination at the facility, the hydrogeologic properties at the facility that may influence contaminant fate and transport, and the anticipated rate and extent of potential migration of documented contamination. RI data will be presented in tables or graphs and, on request, will be available on disk in spreadsheet or ASCII format.

### 7.2 EA REPORTS

Each EA report will include the results of the human health and environmental evaluations used to develop PRGs for the Phase I results or risk-based exposure concentrations for the Phase II results. The reports will be submitted concurrently with the associated RI report.

### 7.3 FS REPORTS

Each FS report will include results of the FS process used in the development of a preferred remedial alternative. The results will include discussions on development of the remedial action objectives, identification and evaluation of appropriate remedial technologies and process options, development and evaluation of specific remedial alternatives, and selection of the preferred alternative.

#### **7.4 PROGRESS REPORTS**

Progress reports will be submitted monthly and will include a summary of activities conducted during the month, problems encountered during the month and the methods for resolution, and the anticipated activities for the next month. These reports will be submitted to DEQ 10 days after the end of each month.

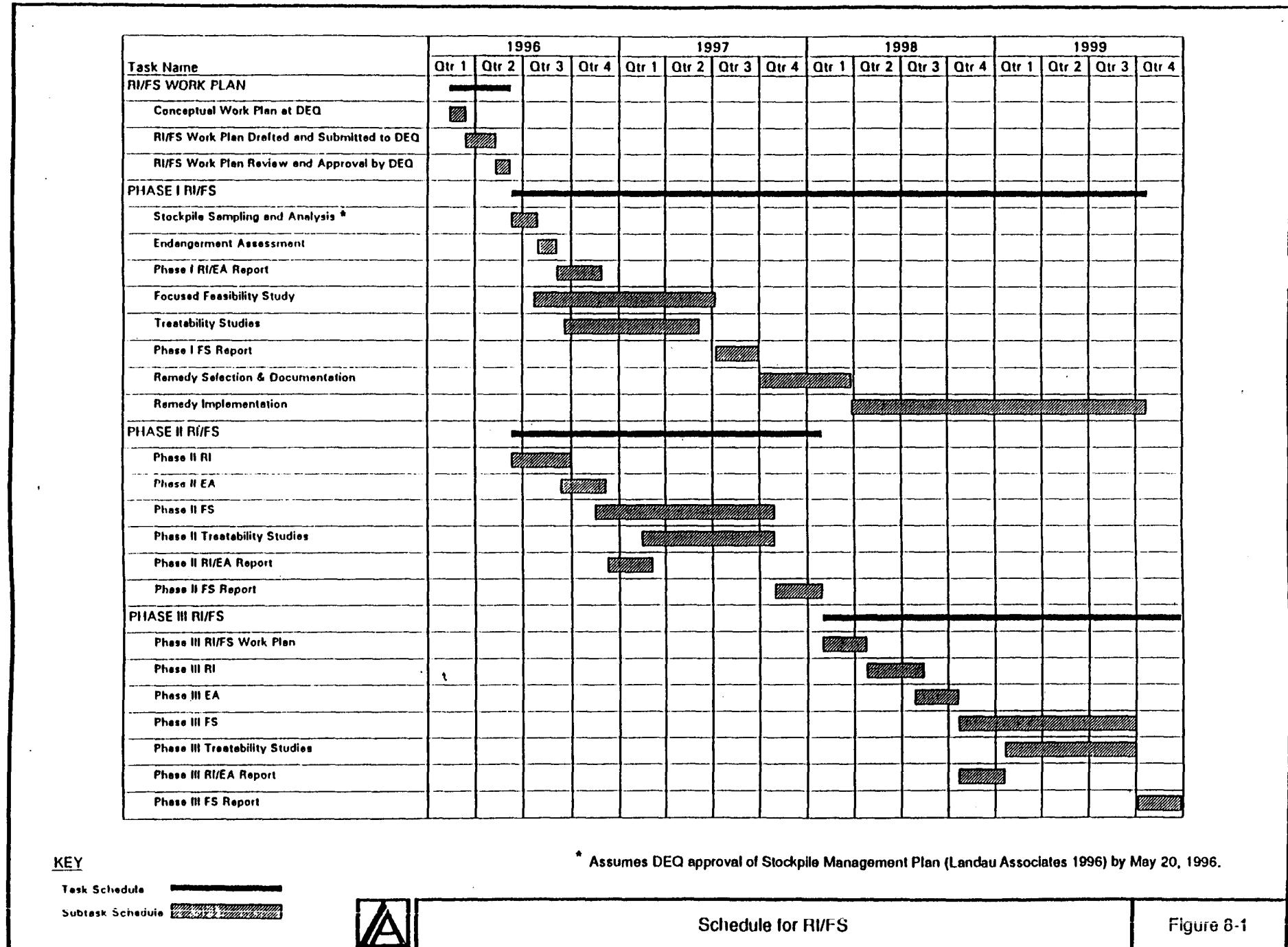
## 8.0 RI/FS SCHEDULE

Phases I and II of the RI/FS will begin when DEQ approves the RI/FS work plan. This presumes that an agreement covering the RI/FS will be in place between Time Oil and DEQ prior to approval of the RI/FS work plan. The proposed RI/FS schedule includes mobilization and completion of a field programs, laboratory analysis of the samples from the field programs, data validation, evaluations, and reporting of the data for each phase. Figure 8-1 illustrates the proposed schedule for the RI/FS.

Inherent within this schedule is the expectation that DEQ personnel will review the progress of the work periodically throughout the RI/FS process. The proposed schedule is based on assumptions consistent with current knowledge and experience; the schedule may change if actual facility conditions or program implementation deviates from those assumptions.

The Phase II RI/FS is expected to commence concurrently with the Phase I RI/FS but is expected to require more time to complete. Phase III will be scheduled when the Phase I and II RI characterizations are completed and the scope of the investigations to be included in that phase has been clarified.

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Schedule for RI/FS

Figure 8-1

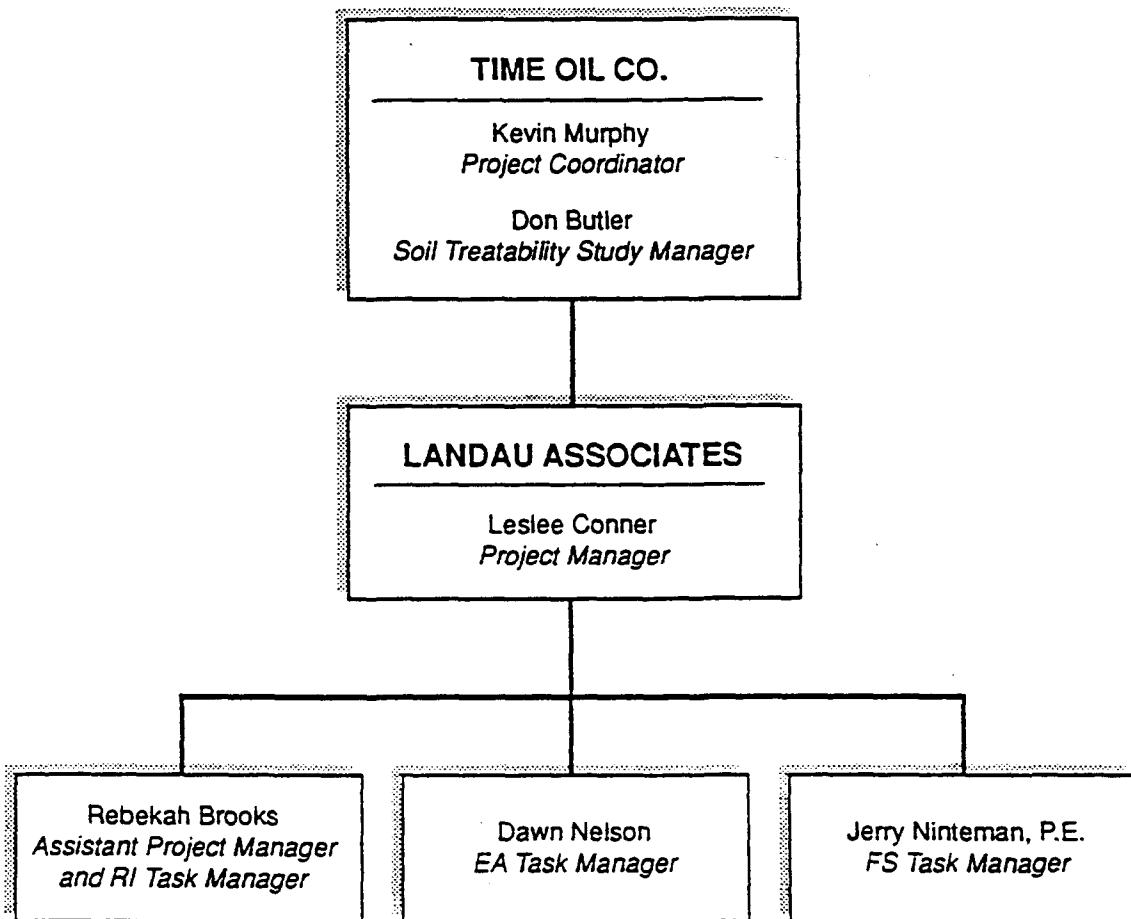
## 9.0 PROJECT MANAGEMENT

The project team for the RI/FS will include the following key personnel assignments and project roles and responsibilities:

- Time Oil project coordinator
- Landau Associates project manager
- Task managers
- Quality assurance officer
- Health and safety officer
- Analytical laboratory project manager and quality assurance officer.

Time Oil has designated Mr. Kevin Murphy as the project coordinator for the Northwest Terminal project. Mr. Murphy will oversee completion of the RI/FS, which will be conducted by Landau Associates, Inc., headquartered in Edmonds, Washington. The organization chart for the RI/FS project team is shown on Figure 9-1.

Laboratory analyses will be performed by Analytical Resources, Inc. (ARI) of Seattle, Washington. Dioxin/furan analyses will be performed by Twin City Testing (TCT) of St. Paul, Minnesota. Time Oil has not yet selected a drilling contractor for the RI/FS. The chosen drilling contractor will be licensed under rules and regulations governing the regulation and licensing of well contractors and operators (OWRD 1990) and will maintain the appropriate level of health and safety training and medical monitoring required for this type of activity in the State of Oregon. The quality assurance project team is identified in the QAPP (Appendix B) and health and safety responsibilities are identified in the health and safety plan (Appendix C).



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APPENDICES

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APPENDIX A

# Field Sampling Plan for RI Field Investigations

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## APPENDIX A

### FIELD SAMPLING PLAN FOR RI FIELD INVESTIGATIONS

This field sampling plan describes procedures for conducting field activities during phases I and II of the remedial investigation (RI) at the Time Oil Northwest Terminal (the facility) in Portland, Oregon. The primary objective of this plan is to provide sampling and analysis methodology consistent with accepted procedures that will maximize accuracy, reproducibility, and comparability of data between sampling events. The sampling methods described in this plan are based on procedures outlined in U.S. Environmental Protection Agency (EPA) guidance documents (EPA 1987, 1988).

This field sampling plan is divided into the following sections:

- Section 1.0      Soil Stockpile Samples
- Section 2.0      Surface Soil Samples
- Section 3.0      Warehouse Dust Samples
- Section 4.0      Soil Boring and Monitoring Well Boreholes
- Section 5.0      Monitoring Well Installation
- Section 6.0      Monitoring Well Development and Redevelopment
- Section 7.0      Monitoring Well Abandonment
- Section 8.0      Groundwater Monitoring
- Section 9.0      Aquifer Testing
- Section 10.0     Sampling, Documentation, And Custody Procedures
- Section 11.0     Equipment Decontamination Procedures
- Section 12.0     References.

#### 1.0 SOIL STOCKPILE SAMPLES

Shallow borings will be completed at random locations within ten rectangular grids in the soil stockpile area, as shown on Figure 4-1 of the work plan text. The borings will be drilled using a hand auger because the boring locations are not readily accessible for mechanical drilling equipment. A limited access, hollow-stem auger drill rig may be used if the boring location is found to be accessible by the limited access rig and/or hand-drilling is impracticable. Shallow borings typically will be about  $\frac{1}{2}$  ft in diameter and will extend to the base of the soil stockpile.

The drilling of all borings will be monitored by a field engineer or geologist. A description of the soil characteristics will be recorded on a log of exploration form (Figure A-1) in general accordance with American Society For Testing and Materials (ASTM) standards D 2487 and D 2488 (ASTM 1994a,b). This log will document the sample locations and sampling depths. The soil classification to be used is presented on Figure A-2.

Before and after drilling, all augers and downhole equipment will be cleaned using a high-pressure hot water washer. Drill cuttings will be placed back onto the stockpile at the sample location.

At each sample location, soil samples will be collected continuously for lithologic logging purposes and for chemical analysis from the surface to the base of the stockpile and will be composited into a single sample. Soil samples will be collected directly from the auger bit and homogenized with a clean stainless-steel spoon or clean shovel in a stainless-steel container. Larger-sized material (gravel greater than approximately  $\frac{1}{4}$ - to  $\frac{1}{2}$ -inch in diameter) will be removed by hand sorting and the soil samples will be placed in the appropriate sample containers (Table A-1). Soil samples to be analyzed for volatile constituents will not be homogenized but will be collected immediately from the sampling equipment using a clean spoon and then placed directly into the appropriate sample container so that little or no headspace remains. Each sample container will be properly labeled, identifying each sample by number, date and time, analysis type, and sampler's initials (Figure A-3). A description of each soil sample, including sample location/number, date/time of collection, lithologic description, sampling method, sample containers, and sampler's initials, will be recorded on a soil sample collection form (Figure A-4). Samples will be placed on ice immediately following collection and during transport to the laboratory. Following excavation and sample collection, the location will be measured from a minimum of two permanent, mapped site features.

## 2.0 SURFACE SOIL SAMPLES

Surface soil samples will be collected from shallow, hand-dug holes using new or decontaminated implements (shovels, picks, etc.) or drilled using a hollow-stem auger drill rig. Asphalt or concrete pavement may need to be removed before drilling or digging of the holes. Drilling procedures for surface samples will be the same as subsurface sample procedures, as described in the following section. If hand dug, the soil typically will be excavated to about 1- $\frac{1}{2}$  ft in diameter and about 1- $\frac{1}{2}$  ft in depth. Material excavated from the surface soil sample locations

will be stored temporarily on plastic sheeting until the associated sample collection activities are completed.

Each surface soil sample will be comprised of equal amounts of three to four soil subsamples taken at randomly distributed locations around the perimeter of the hand-dug holes. Before sample collection, the exposed soil surfaces in the holes will be scraped with a decontaminated stainless steel spoon to expose a clean surface for sample collection. Surface vegetation and other deleterious material also will be removed prior to sampling, where necessary. At the selected depth intervals (Table A-2), soil samples for chemical analyses will be collected with decontaminated stainless steel spoons and homogenized in decontaminated stainless-steel bowls. Larger-sized material (gravel greater than approximately  $\frac{1}{4}$ - to  $\frac{1}{2}$ -in diameter) will be removed by hand sorting and the soil samples will be placed in the appropriate sample containers (Table A-1). The samples will be analyzed initially using an immunoassay field screening method for pentachlorophenol (PCP), total petroleum hydrocarbons (TPH), and polychlorinated biphenyls (PCBs); however, sample containers will be filled for other analyses at the same time. Soil samples to be analyzed for volatiles will not be homogenized but will be collected from the perimeter of the hole using a decontaminated spoon and then placed directly into the appropriate sample container so that little or no headspace remains, before processing of soil samples for other analyses. Each sample container will be properly labeled, identifying each sample by number, date and time, analysis type, and sampler's initials (Figure A-3). Samples will be placed on ice immediately following collection and during transport to the laboratory. Soil samples collected below the sample depth of 0-6 inches will be archived until the field screening results are evaluated.

Following excavation and sample collection, each hole will be backfilled with soil excavated at that sample location and a description of each surface soil sample will be recorded on a soil sample collection form (Figure A-4). The soil description will generally include the same parameters described in Section 4-1 for boreholes.

### 3.0 WAREHOUSE DUST SAMPLES

Dust samples will be collected from the structural support members (e.g. beams, sills, rafters) from at least two locations within the former PCP warehouse, to the extent possible. Dust samples will be collected directly into a sample container using decontaminated or new disposable implements such as a spoon or spatula. Samples will be stored on ice immediately following

collection and during shipment to the analytical laboratory. Sample collection will be documented on a soil sample collection form (Figure A-4).

## 4.0 SOIL BORING AND MONITORING WELL BOREHOLES

This section provides procedures for drilling and soil sample collection of soil borings and monitoring well boreholes. Soil sample procedures for screening of dense nonaqueous phase liquid (DNAPL) during drilling are also included.

### 4.1 DRILLING PROCEDURES

Drilling of soil borings and monitoring well borings will be performed in accordance with applicable Oregon Water Resources Department (OWRD) regulations (OWRD 1990) and Oregon Department of Environmental Quality (DEQ) guidance (DEQ 1992). Borings will be drilled using either a hollow-stem auger (soil borings and shallow wells) or a cable tool rig (deep wells). The location of each proposed borehole will be checked in the field to locate all underground and aboveground utilities, or other physical limitations that would prevent drilling at the proposed location; the final location for each borehole will be based on the findings of the field check. Drilling of shallow soil and monitoring well borings will terminate at, or extend a maximum of 2 ft into, the confining layer. For the deep monitoring wells, precautions will be taken to minimize the potential for cross contamination between the upper and lower water-bearing zones by using the following procedures:

1. Drilling will begin using an 8- or 10-inch diameter temporary steel casing advanced with the progress of the drilling.
2. Upon encountering the top of the confining layer, drilling will stop and the large-diameter temporary steel casing will be advanced no more than 2 ft into the confining layer.
3. The lower portion of the borehole will be sealed with several feet of bentonite chips. Before drilling continues, the bentonite chips will be allowed to hydrate for at least 12 hours, or until the integrity of the grout is verified and determined to be adequate.
4. A smaller diameter (6- or 8-inch) temporary steel casing will then be lowered inside the 8- or 10-inch casing to the bottom of the hole and drilling will continue through this smaller diameter casing until the total well depth within the lower water-bearing zone is reached.

The drilling of all borings and well installations will be monitored and recorded by a Landau Associates field representative working under the supervision of an Oregon registered geologist. Soil cuttings will be observed continuously and screened for organic vapors using a photoionization detector (PID). A record of the soil and groundwater conditions will be maintained during drilling on a log of exploration form (Figure A-1). The boring log will show sampling depths, sampling methods, sample recoveries, soil types (in accordance with the soil classification system presented on Figure A-2), stratifications, evidence of contamination as indicated through visual observations and the use of appropriate instrumentation (e.g., PID, UV lamp, etc.), groundwater conditions, and other pertinent information. Each log also will contain the names of the drilling company and drillers, the type of drill rig, starting and finishing dates for drilling, borehole diameter, boring well number, and boring well location.

Before and between drilling each boring, temporary steel casings and downhole drilling and sampling equipment will be cleaned using a high-pressure hot water washer, as described in Section 11.0. Before installation of the wells, casing centralizers and screens will be similarly cleaned and inspected for damage.

Each borehole either will be backfilled or a monitoring well will be installed in accordance with Section 5.0 after drilling and soil sample collection is completed. For the soil borings, tremied Volclay grout or a high-solids bentonite grout (e.g., American Colloid Pure Gold grout), will be used to backfill the borehole to within 1 ft of the ground surface as temporary casing or augers are slowly withdrawn. From this point to the ground surface, the borehole will be filled with a bentonite/cement grout.

## 4.2 SOIL SAMPLE COLLECTION

At each soil boring sampling location and within each monitoring well borehole, soil samples will be collected for chemical analysis and for fate and transport properties using a properly decontaminated split-barrel sampler to obtain relatively undisturbed soil samples. The samples will be collected at the depth intervals and the analyses identified in Table A-2. Soil samples also may be collected when elevated levels of organic vapor are detected using a PID in the cuttings or if DNAPL is determined to be present (see Section 4.3). The following procedures will be used to collect soil samples from borings for chemical analyses:

- Soil samples will be logged on the log of exploration form (Figure A-1) or in field notes. Selected soil samples will be screened in the field for the presence of DNAPL using the procedures outlined in Section 4.3.

- Soil samples to be analyzed for volatiles will be collected immediately after opening the spilt-barrel sampler or core and before any other soil processing for chemical analyses. Samples will not be collected from exposed surfaces that have been in direct contact with the sampler. The sample will be collected using a decontaminated stainless-steel spoon and placed in the appropriate sample container so that little or no headspace remains.
- The remaining sample will be homogenized in a decontaminated stainless-steel bowl. Larger-sized material (gravel greater than approximately  $\frac{1}{4}$ - to  $\frac{1}{2}$ -inch in diameter) will be removed, and the soil samples will be placed in the appropriate sample jars and preserved as specified in Table A-1.
- Sample jars will be labeled, identifying each sample by number, date and time, analysis type, and sampler's initials. The samples will be placed on ice immediately after collection and during transport to the laboratory.
- Sampling equipment that comes in contact with potentially contaminated soil or water will be decontaminated before and after each use. See Section 11.0 for decontamination procedures.

To obtain relatively undisturbed soil samples for vertical hydraulic conductivity ( $K_v$ ) and grain size tests, the split-barrel sampler will be lined with ten 1-inch high brass rings prior to driving the sampler. Following collection of the soil core, a maximum of six rings will be removed at the desired depth interval or where soil is least disturbed and placed in a plastic tube lined with a plastic bag and capped at both ends. Soil samples collected for grain size analysis will be placed in reclosable bags. Each sample collected will be properly labeled, identifying each sample by name/location, depth, date and time, and sampler's initials, and will be preserved and transported using procedures described in Section 10.0. Soil samples will be recorded on the log of exploration form (Figure A-1) or in field notes.

After drilling and sample collection is completed, each borehole either will be backfilled or a monitoring well will be installed in accordance with Section 5.0.

#### 4.3 DNAPL SCREENING

Split-spoon soil samples will be screened in the field for the presence of DNAPL using the following procedures (EPA 1993):

- Soil samples will be collected in a clean polypropylene or glass jar.
- Soil samples will be scanned with a PID and the reading recorded on the log of exploration (Figure A-1).

- Each sample will be observed with ultraviolet light for fluorescence; results will be recorded on the log of exploration.
- Hydrophobic dye (Sudan IV from Aldrich Chemical Co.) will be added to the sample, and the sample will be shaken for 10 to 30 seconds and examined for DNAPL presence. Results will be noted on the log of exploration or in field notes. The hydrophobic dye will stain the DNAPL, if there is any present.

Soil samples that indicate the presence of DNAPL will be sent to the laboratory and analyzed for chlorinated phenols and semivolatiles.

## 5.0 MONITORING WELL INSTALLATION

The monitoring wells will be installed in accordance with the design features shown on Figures A-5 and A-6 and in accordance with OWRD regulations (OWRD 1990). Each monitoring well installation will be monitored by a Landau Associates field representative under the supervision of a registered Oregon geologist. The field representative will maintain an as-built well completion form (Figure A-7) showing well construction details.

### 5.1 MONITORING WELL CASING MATERIALS

The shallow and deep monitoring wells generally will be constructed of 2-inch (nominal) threaded Schedule 40 PVC (NSF approved) casing with PVC screen, unless otherwise specified (Well LW2S, located within the former PCP mixing area, will be constructed of 4-inch PVC to increase its long-term versatility). The well casing will be installed to the target depth through the auger stem or temporary steel casing. In the deep wells, stainless steel centralizers will be installed above and below the screen. Once the well casing and the screen are installed, the total length of the well will be verified and documented by lowering a weighted tape to the bottom of the inside of the well.

### 5.2 SCREEN INTERVAL AND LOCATION

Wells installed in the upper water bearing zone (shallow wells) will be screened over a 10 ft interval from near the base of the aquifer upward across the water table to a level above or approximately equaling the expected seasonal high water level. Wells installed in the lower water bearing zone (deep wells) will be screened over a 5-ft interval to allow collection of more discrete samples for water quality analysis. The well screen slot size will be 0.020 inch based on currently

available site information (the screen slot size may be modified based on initial field observations and grain size analysis).

### **5.3 ANNULAR SAND PACK**

A filter pack will be installed around the screen, extending from the bottom of the end cap to a maximum of 3 ft above the screen. Filter pack material will be commercially prepared, presized, prewashed No. 10-20 Colorado silica sand or equivalent (the filter pack size may be modified if necessary to correspond with slot size modifications). The filter pack will be installed through a tremie pipe or carefully poured down the annulus between the well casing and the temporary casing, as the temporary casing is slowly withdrawn. During filter pack placement, the distribution and depth of the filter pack will be monitored with a weighted tape. A 2-ft layer of fine sand (No. 20-40 or finer) or bentonite chip seal will be placed above the sand pack.

### **5.4 ANNULAR SEAL**

The annular space above the seal to the surface seal will be filled with Volclay or a high-solids bentonite grout (e.g. American Colloid Pure Gold grout). The bentonite grout will be installed through a tremie pipe as augers or temporary casing is slowly withdrawn. For all well installations, the tremie pipe will be sealed at the lower end and have side discharges to prevent grout from getting into the sand pack. Grout densities will be checked in the field using a mud balance. The annular seal will be allowed to set for 12 hours prior to completing the surface seal.

### **5.5 CASING ALIGNMENT CHECK**

Following grouting, well alignment will be determined by lowering a 3-ft long, 1.5-inch outside diameter (OD) or larger bailer into the well.

### **5.6 CEMENT SURFACE SEAL AND SECURITY MEASURES**

Cement grout (less than 4 percent bentonite) not less than 2 ft thick will be placed above the bentonite grout to ground surface. The surface of each well will be finished using bentonite chips (if required to firm the grout) and a concrete surface seal. Locking steel monuments with drain holes will be cemented in place at the surface to a depth of about 3 ft. A 2x2-ft concrete pad with a minimum thickness of 4 inches will be constructed around each well at the ground surface to

divert rainfall away from the well casing. A flush-mounted steel monument will be used to protect the well in areas where vehicular traffic precludes the use of an aboveground monument.

## 6.0 MONITORING WELL DEVELOPMENT AND REDEVELOPMENT

The new monitoring wells will be developed after the final grout has set in the well annulus for a minimum of 24 hrs. Based on anticipated soil and groundwater conditions, the wells will be developed by purging with a centrifugal pump. Development will remove soil introduced during installation activities and establish hydraulic continuity between the filter pack and the formation. Development will continue until at least 5 to 10 casing volumes are removed, soil is reasonably cleared from the well, and the turbidity of the development water is low. Development water will be contained in a temporary staging area at the facility, as discussed in Section 4.4 of the work plan. No groundwater sampling of monitoring wells will be performed for at least 5 to 7 days following development. Well development information will be recorded on the development record form (Figure A-8).

Redevelopment of existing monitoring wells will be conducted before sampling for the initial groundwater screening event or quarterly groundwater event. Redevelopment procedures will follow the development procedures discussed above for new monitoring wells.

## 7.0 MONITORING WELL ABANDONMENT

Monitoring well point E and wells I and 1, which have been damaged, will be abandoned during Phase II RI activities at the facility in accordance with Oregon State regulations (OWRD 1990). Well Point E is constructed of 2-inch PVC casing and was reportedly installed to a depth of 20 ft BGS; however, field observations (August 10, 1993) revealed that the well monument is intact, but the well casing was filled with soil to about 0.5 ft BGS. No other well construction information is available. Well I is constructed of 2-inch PVC casing and reportedly was installed to a depth of 18.35 ft BGS with a 10-ft, 0.020-inch slotted screen. Based on field observations (August 10, 1993), the well is currently covered (with a bucket buried to its base) and is inaccessible. Well 1 was installed at a 45° angle underneath the former PCP warehouse. The well is constructed of 23 ft of 4-inch PVC casing with 10 ft of screen at the base of the well. The true vertical depth of the well is about 14 ft BGS. The well casing is not protected by a well monument. During February 1994, because the well casing was accidentally broken off near the ground surface during facility operations, it was cut flush with the ground surface and covered with a well cap.

The wells will be abandoned by first removing the well monument (well E only) and surface seal material from the wells. The 2-inch PVC well casing will be removed either by overdrilling around the casing, pulling the casing, and drilling the casing out completely, or perforating the casing from the base to the ground surface. All casing, annular seal, and filter pack material will be removed by overdrilling the well to the original total depth and borehole diameter prior to sealing. The overdrilled borehole will be filled with a sealing material (grout or bentonite) by piping the sealing material directly to the bottom of the borehole using a tremie pipe and filling the annular space upward from that point. The discharge end of the tremie pipe will be kept submerged below the surface of the grout while it is being applied. Because well 1 is angled and filter pack material and annular seal were not used during construction, the well casing will be pulled without overdrilling or pressure-grouted in place. If the casing is pulled, the sealing material will be added to the borehole using a tremie pipe as the casing is slowly withdrawn. Time Oil will request a variance from OWRD for this procedure.

The abandonment procedures will be recorded on the appropriate DEQ form and provided to DEQ within 30 days.

## 8.0 GROUNDWATER MONITORING

This section provides the procedures for conducting groundwater monitoring, including measurement of water levels and groundwater sampling from monitoring wells and from boreholes during drilling.

### 8.1 WATER LEVEL MEASUREMENT PROCEDURES

Water levels will be measured in each of the new and existing wells and well points in conjunction with groundwater sampling events, before groundwater samples are collected. Water levels will be measured using an electronic water level indicator or steel tape and will be recorded to the nearest 0.01 ft. Measurements will be taken from a marked survey point at the top of each well casing, or, if no mark is available, from the northern edge of the casing. To avoid cross contamination between wells, the indicator probe and affected cable will be rinsed with deionized water before the first measurement of the day, between each well, and at the end of the day. Water level information will be recorded on a water level measurement form (Figure A-9).

Following measurement of water levels but before initiating the presampling purge, each well will be checked for the presence of light nonaqueous phase liquids (LNAPL) or DNAPL using

oil-finding paste or a water-oil interface probe. If a separate phase is found, it will be collected once as a separate sample with a bailer or peristaltic pump, and a groundwater sample will not be collected.

To evaluate tidal influence in the upper and lower water-bearing zones, water levels will be monitored over a 24- to 48-hour period in selected wells (currently expected to be wells G1A, J1, J2, J3, D, LW3D, LW4S, LW4D, LW6D, and R and in the Willamette River). The water levels in the J wells, LW6D, and the river will be monitored using a Microscout datalogger (or equivalent) and pressure transducers; water levels in the other selected wells will be obtained manually or by transducers. Water levels also will be measured manually in all the other monitoring wells at least twice per day during the monitoring period.

This water level information will be evaluated by transferring the transducer data into a spreadsheet program for manipulation and correction of transducer drift, if necessary. Plots of water level elevation over time will be generated to evaluate tidal responses at each selected monitoring location.

## 8.2 GROUNDWATER SAMPLING PROCEDURES

Groundwater samples will be collected and analyzed for the constituents shown on Table A-3 from existing and new monitoring wells. Sample containers, preservatives, and holding times for each analytical method are provided on Table A-1.

The following procedures will be used to collect Phase II RI groundwater samples for the initial groundwater screening event and for quarterly groundwater sampling events:

- Before sampling, depth to water and well depth will be measured to the nearest 0.01 ft and recorded on the sample collection form for groundwater sampling (Figure A-10). The height of water in the well will be calculated.
- Specific conductivity and pH meters will be calibrated according to manufacturer's specifications at the beginning of each sample day and every 4 hours afterward. Calibration data will be recorded in a log maintained for each instrument. Meter calibration will be checked at least twice during a sample day (middle and end of day) or when meter drift is suspected, and data will be recorded in the calibration log. The meters will be calibrated with solutions buffered closest to known field parameters; usually this is pH = 7 and specific conductivity = 200  $\mu\text{S}$ .
- Before sampling, the well will be purged using a purge pump with dedicated teflon tubing. Purging will continue until at least three casing volumes of water have been removed and specific conductance and temperature has stabilized (when the replicate

sample measurements vary by no more than 10 percent) or until the well is dry. Purge volume will be calculated based on the following formula:

1 well volume (gallons) =  $\pi r^2 h \times 7.48$  gal/ft<sup>3</sup>, where  $\pi = 3.14$ ,  
r = radius of well casing in ft, h = height of water column from the  
bottom of the well, in ft.

- The wells will be purged at a rate below the rate that was used for development and below their recovery rate to prevent further development of the well, to prevent damage to the well, and to reduce migration of water in the formation above the well screen.
- The well will not be purged at a rate that allows formation water to vigorously cascade down the sides of the screen.
- Purge data will be recorded on the sample collection form, including purge volume, time of beginning and termination of purging, and observations regarding color, turbidity, or other factors that may be important in evaluation of sample quality.
- Purge and decontamination water will be contained in drums or in a storage tank located in a temporary staging area at the facility for proper disposal.
- Groundwater sampling will begin immediately following well purging or if the well purges dry, as soon as enough water is available in the well for sampling. Sample data will be recorded on the sample collection form, including sample number and time collected, the observed physical characteristics of the sample (e.g., color, turbidity, etc.), field parameters (pH, specific conductance, and temperature), and other data that may be important in the evaluation of sample quality.

On low-yielding wells, pH, temperature, and specific conductance will be measured at the beginning and end of sampling.

The following procedures will be used to obtain the four replicate field measurements of pH and specific conductance:

- A 250-mL plastic beaker will be rinsed with sample water.
- The electrodes and temperature compensation probe will be rinsed with sample water.
- The beaker will be filled with sample water; the probes will be placed in the beaker until the reading stabilizes. Temperature, pH, and specific conductance measurements will be recorded on the sample collection form.
- The above step will be repeated to collect remaining replicates.
- Problems or significant observations will be noted in the comments section of the sample collection form.

- Groundwater samples will be collected for all parameters except volatile organic analysis (VOAs) using a peristaltic pump with dedicated teflon tubing for each well; VOA samples will be collected first, using a disposable teflon bailer or the peristaltic pump. To prevent degassing during sampling, the pumping rate will be adjusted below 100 mL/min (or a bailer will be lowered gently into the water column). Clean gloves will be worn when collecting each sample.
- The water sample will be discharged or poured slowly and carefully into appropriate sample containers to minimize aeration. VOA containers will be completely filled so that no head space remains. VOA sample containers will be checked for air bubbles by turning the bottle upside down, tapping it lightly to make air bubbles move to the bottom of the sample bottle. If air bubbles are observed in any of the VOA containers, the container will be emptied and refilled (once only) or a new container used. Water for major ion or dissolved metal analyses will be collected last and field filtered through a 0.45-micron, in-line, disposable filter. A note will be made on the sample label, sample collection form, and chain-of-custody form (Figure A-11) to indicate the sample has been field filtered. Samples will be preserved as specified in Table A-1. Samples will be chilled on ice immediately after sample collection.
- Duplicate samples will be collected by alternately discharging the pump or bailer into duplicate sample bottles. Duplicate samples will be labeled with a separate sample number and the number will be noted on the sample collection form. Duplicate samples will receive a designation unrelated to the primary sample and traceable to the sample location only through sample collection forms and log notation.

All sampling will be conducted in accordance with the appropriate provisions of the project health and safety plan (Appendix C).

### 8.3 BOREHOLE SAMPLING PROCEDURES

Groundwater samples will be collected from selected soil borings during drilling. The samples will be collected by installing a well point ahead of the auger during drilling and collecting the sample following purging to lower the turbidity. Alternatively, the groundwater may be collected using a decontaminated or new disposable bailer (See Section 11.0 for decontamination procedures). The groundwater samples will be collected at or near the water table, when elevated levels of organic vapor are detected from the soil samples, and possibly at the base of the upper water-bearing zone. The samples will be analyzed using the immunoassay field screening method for PCP and TPH. Depth to water, pH, specific conductance, and temperature will be measured and recorded on a sample collection form (Figure 10.)

## 9.0 AQUIFER TESTING

Aquifer testing will be conducted using either variable head (slug) tests or pumping tests. The general procedures for these test methods are described in this section.

### 9.1 SLUG TESTS

Slug tests will be used to measure *in situ* hydraulic conductivity at selected new monitoring wells. The tests will be conducted by causing an instantaneous change in the water level in the test well and measuring the water level response within that well. Two methods of slug testing may be used: 1) pneumatic system (Levy and Pannell 1991) or 2) cylinder.

Slug tests using the pneumatic system will be used at monitoring well locations where the well screen is fully saturated. Rising head and falling head tests will be performed by applying a vacuum or pressure, respectively. The pneumatic system will consist of four components: the well head assembly, air compressor with the capability of supplying pressure or a vacuum, an electronic datalogger, and pressure transducer. The well head assembly is shown on Figure A-12. The pressure test will be conducted by closing the quick-release valve and adding the appropriate amount of pressure or vacuum to displace the desired volume of water. Changes in water levels will be monitored with a datalogger and pressure transducer to verify the volume of water displaced and to establish when equilibrium has been reached under the new pressure. After equilibrium is reached, the quick release valve will be opened, instantly changing the air pressure within the well and allowing the displaced water to return to static levels. The datalogger will be activated at the same time as the quick-release valve is opened, and the logger will record changes in head versus logarithmic time, starting with an interval of 0.2 seconds.

Slug tests using the cylinder method will be conducted by suddenly introducing and removing a solid cylinder of known volume and observing the water level change in the test well. The cylinder will consist of PVC casing, sealed on both ends, which contains clean sand or water at a volume necessary to displace at least 2 ft of water within the well column. The cylinder will be placed into the well column, and the water level response will be recorded. After the water levels have stabilized, the cylinder will be removed from the well, and the water level displacement will again be monitored. The testing procedures will be repeated at least two times at each well location.

## **9.2 PUMPING TESTS**

Pumping tests will be conducted at new monitoring wells following evaluation of the slug test results, the first groundwater sampling event, and the boring data results from the confining layer. The pumping tests may be conducted at variable pumping rates (step-discharge test) and/or at constant pumping rates (constant discharge test). The pumping rates for each test and duration of pumping will be determined based on well yields observed during well development. Pumping rates for each well will be monitored using a calibrated, totalizing flow meter or calibrated bucket and stop watch. Pumping rates will be kept constant (within 5 percent) during an aquifer test pumping interval. Pumped water will be collected in a temporary storage tank and discharged to the sanitary sewer system (following treatment, if appropriate).

## **9.3 WATER LEVEL MONITORING DURING AQUIFER TESTS**

Water levels will be monitored in the test well and selected observation wells before (baseline monitoring), during, and after (recovery monitoring) each aquifer test. Baseline monitoring will be conducted within 24 hours of the initial slug or pumping test at each test well and observation well location. Recovery monitoring will continue after each aquifer test until baseline conditions are observed, or sufficient data has been collected to allow evaluation.

Water levels will be recorded using pressure transducers (coupled to digital dataloggers) or manual electric water level indicators in the test wells and observation wells. Water levels will be measured manually in the wells equipped with transducers for calibration purposes before and after performance of the aquifer tests.

## **10.0 SAMPLE HANDLING, DOCUMENTATION, AND CUSTODY PROCEDURES**

Sample handling and documentation procedures are summarized in this section. These procedures and protocols for each sampling activity were developed to meet the data quality objectives (Appendix B) and are based on proven and acceptable sampling methods as established by EPA guidance documents, Oregon State regulations, and professional judgment. When modification of an approved sampling protocol is necessary, the modification is included in this document. The laboratory shall notify Time Oil and/or Landau Associates before any modification of laboratory procedures.

Sample handling, documentation, and custody procedures are briefly identified below.

## 10.1 SAMPLE HANDLING AND TRANSPORT

Procedures for sample collection and handling and sample packaging and shipping are described in this section

### 10.1.1 SAMPLE COLLECTION AND HANDLING

- Sample collection procedures and protocols for each sampling activity are described in detail in Sections 1.0 through 5.0 and 8.0 of this appendix.

Sample containers, preservatives, and holding times will be selected according to the type of sample collected and the analytical method to be used. Strict precautions will be taken to adhere to maximum sample holding times. Sample containers, preservatives, and holding times for each analysis are presented in Table A-1. Each sample will be documented, labeled, and identified as noted in Section 10.2.

### 10.1.2 SAMPLE PACKAGING AND SHIPPING

Samples will be packaged and transported in a manner that protects the integrity of the sample and prevents detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the U.S. Department of Transportation (DOT) in the Code of Federal Regulations (CFR), 49 CFR 171 through 177.

Soil and water samples will be placed on sealed, reusable ice packs or double-bagged ice in coolers immediately after collection. At the end of each day, samples to be sent to the analytical laboratory or to be analyzed using field screening methods will be inventoried. The samples to be analyzed by field screening methods will be maintained on ice at the facility or will be refrigerated at Landau Associates' office in Edmonds, Washington. In preparation for shipping soil and water samples to the analytical laboratory, the drain plug of the cooler will be taped shut, and a large plastic bag will be used as a liner. When appropriate, approximately 1 inch of packing material will be placed in the bottom of the liner.

The soil and water sample containers will be shipped in a lined cooler containing ice. Samples will be packaged carefully to avoid breakage or cross contamination using sufficient packing material and will be shipped to the offsite analytical laboratory at the appropriate

temperatures. The large liner bag, where used, will be taped shut and the chain-of-custody forms accompanying the samples to the laboratory will be placed inside a separate plastic bag and taped inside the shipping container lid.

The shipping container will be taped shut with strapping tape. Custody seals will be placed on the containers. The shipping containers either will be air-freighted to the laboratory by an overnight carrier or transported by surface carrier.

## 10.2 SAMPLE CUSTODY AND DOCUMENTATION

This section describes the protocols to be used for sample custody in the field and laboratory, during shipment, and during transfer of sample possession and the protocols for documentation of field activities.

### 10.2.1 SAMPLE CUSTODY

The primary objective of sample custody is to create an accurate record that can be used to trace the possession and handling of samples so that their quality and integrity can be documented and maintained from collection until completion of all required analyses. Adequate sample custody will be achieved by means of the chain-of-custody record initially completed by the sampler, and thereafter signed by each individual who accepts custody of the sample. An example chain-of-custody record is shown on Figure A-11. A sample will be considered to be in custody under the following conditions:

- Someone has the sample in physical possession
- Someone has the sample in view
- The sample is locked or secured in a locked container or otherwise sealed so that tampering will be evident
- The sample is kept in a secured area, restricted to authorized personnel only.

Sample control and chain-of-custody in the field and during transport to the laboratory will be conducted in general conformance with the procedures described below and in Section 4 of *A Compendium of Superfund Field Operations Methods* (EPA 1987).

#### **10.2.1.1 Field Custody Procedures**

The following field custody procedures will be followed:

- As few persons as possible will handle samples.
- Sample bottles will be purchased directly from the manufacturer by Time Oil or Landau Associates or obtained new or precleaned from the laboratory performing the analyses.
- The person collecting the sample will be responsible for completing the chain-of-custody record and for the care and custody of collected samples until they are transferred to another person under chain-of-custody rules.
- The Time Oil or Landau Associates field representative will oversee field custody procedures during the fieldwork and in the event of noncompliance, will determine if corrective action is required.

#### **10.2.1.2 Sample Shipment Custody Procedures**

The following custody sample shipment procedures will be followed:

- The coolers in which the samples are shipped will be accompanied by the chain-of-custody record identifying their contents. The original record and laboratory copy will accompany the shipment (sealed inside the shipping container). The other copy will be distributed, as appropriate, to the Landau Associates QA task leader.
- Shipping containers will be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information will be entered in the remarks section of the chain-of-custody record.
- If sent by mail, the package will be registered with return receipt requested. If sent by common carrier, a bill of lading will be used. Freight bills, postal services receipts, and bills of lading will be retained as part of the permanent documentation.

#### **10.2.1.3 Transfer of Custody**

When samples are transferred, the individual(s) relinquishing and receiving the samples will sign the chain-of-custody record and document the date and time of transfer. The person who collected the sample will sign the form in the first signature space. If the samples are shipped via commercial carriers, the chain-of-custody records will be sealed inside the sample container before delivery and the custody signature will be from the person who receives the samples from the carrier at its final destination. Each person taking custody will evaluate the integrity of the shipping container seal and note any observations on the chain-of-custody record. Project documentation of sample custody will be verified during regular review of the data validation package.

#### **10.2.1.4 Laboratory Custody Procedures**

A designated sample custodian at the laboratory will accept custody of the shipped samples, verify the integrity of the custody seals, and certify that the sample identification numbers match those on the chain-of-custody record. The custodian will log the sample identification numbers and requested analyses in accordance with laboratory QA/QC protocols. If containers arrive with broken custody seals, the laboratory will note this on the chain-of-custody record and will immediately notify the Landau Associates QA task leader so the potential for sample tampering can be evaluated. The laboratory will maintain sample security and custody throughout the analytical process.

#### **10.2.2 DOCUMENTATION**

Documentation necessary to meet the QA objectives for this project includes:

- Field notebooks (logbooks) in which general field observations and activities are recorded
- Field sampling forms specific to sampling (chain-of-custody, etc.)
- Sample container labels
- Photographs.

If an error is made on any field documentation, corrections will be made by drawing a single line through the error and entering the correct information. Whenever possible, errors will be corrected by the person who made the entry. Corrections will be initialed, dated, and, if necessary, a footnote explaining the correction will be included. The erroneous information will not be discarded. All field documentation and project records will be filed to prevent loss, damage, or alteration. Access to any archived project files or laboratory data will be controlled to maintain integrity of the documentation.

##### **10.2.2.1 Field Notebook**

Daily field documentation is necessary to provide sufficient data and observations to enable participants to reconstruct events that occurred during the project and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. Daily field notes pertinent to the individual field tasks will be recorded using nonerasable waterproof ink in a bound,

waterproof field notebook containing consecutively numbered pages. Corrections will be made as explained above. Information documented on field sampling forms need not be repeated in the field notebook; however, reference must then be made in the field notebook to the field forms.

#### 10.2.2.2 Field Sampling Forms

To aid in achieving complete data, task-specific field sampling forms (e.g., chain-of-custody record, sample collection form, etc.) will be used to document sampling activities. Example field sampling forms to be used for soil and groundwater sampling are included on Figures A-4 and A-10, respectively.

#### 10.2.2.3 Sample Container Labels and Identification Format

Each sample container will be labeled, chemically preserved if required, and sealed immediately after collection. Sample container labels will be filled out using waterproof ink and will be firmly affixed to the sample containers. Sample label information also will be recorded on the appropriate field sampling forms. An example sample container label is shown on Figure A-3.

The sample container label will contain the following information:

- Sample number
- Project number
- Date and time of collection
- Name of sampler(s)
- Analysis required
- Preservation (if applicable).

Additional identifiers may be added, as necessary, based on the specific sampling activity. Actual sample locations and other identification information will be recorded in the field notes and on the appropriate sample collection forms. Field QC samples will be coded as individual samples and identified in the field notes and on sample collection forms.

#### 10.2.2.4 Photographs

Photographs may be taken in the field to document sampling locations and conditions. When taken, photographs will be recorded on the photograph documentation form (Figure A-13)

and/or in field notebooks. The final print will be dated, initialed, and appended with a brief description of location and purpose.

## 11.0 EQUIPMENT DECONTAMINATION PROCEDURES

Sampling equipment will be decontaminated before collecting each sample to avoid cross contamination between samples. Decontaminated sampling equipment will be handled in a manner that minimizes contact with potentially contaminated surfaces. Between sampling events, all nondedicated pumps and tubing will be stored in a manner (e.g., in a plastic bag) that protects them from inadvertent contamination.

### 11.1 Heavy Equipment

All heavy equipment used for drilling and/or excavation (e.g., hollow-stem auger) will be decontaminated in an established decontamination area using a high-pressure, hot-water washer before and after each use at each exploration location.

Permanent well casings and screens will also be decontaminated using a high-pressure washer before installation, if factory decontamination procedures cannot be documented.

### 11.2 Sampling Equipment

Decontamination procedures for soil and groundwater sampling equipment will be used to minimize the possibility of cross contaminating samples. Sampling equipment that comes in contact with potentially contaminated material will be decontaminated before and after each use. Decontamination of sampling equipment will consist of the following steps and will be documented on the sample collection form:

1. Initial tap water rinse to remove large soil particles, if applicable
2. Alconox and tap water wash
3. Tap water rinse
4. Hexane rinse
5. Deionized or distilled water rinse.

The discharge tubing that is used for groundwater sampling will be decontaminated between wells, or dedicated tubing will be assigned to each well.

## 12.0 REFERENCES

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LANDAU  
ASSOCIATES,  
INC.

## Log of Exploration

Exploration No. \_\_\_\_\_

Sheet \_\_\_\_\_ of \_\_\_\_\_

1

North  
Arrow

Client/Owner \_\_\_\_\_ Project No. \_\_\_\_\_

Project No. \_\_\_\_\_

Start Date \_\_\_\_\_ Hour \_\_\_\_\_

-Hour-

**Ground Surface Conditions** \_\_\_\_\_

Weather Conditions \_\_\_\_\_

**Landau Bros.** **Contractor/**  
**Subcontractor**

#### **Exemption Method**

### **Location Sketch (show dimensions to mapped features)**

Grafix 1013

Total Depth \_\_\_\_\_ Finish Date \_\_\_\_\_ Hour \_\_\_\_\_ Continued



## Log of Exploration

**Figure A-1**

10000

TOLS005427

BZTO104(e)042248

## Soil Classification System

MAJOR DIVISIONS	GRAPHIC SYMBOL	USCS LETTER SYMBOL (1)	TYPICAL DESCRIPTIONS (2)(3)	
COARSE-GRAINED SOIL (More than 50% of material is larger than No. 200 sieve size)	CLEAN GRAVEL (Little or no fines)	GW	Well-graded gravel; gravel/sand mixture(s); little or no fines	
	GRAVEL WITH FINES (Appreciable amount of fines)	GP	Poorly graded gravel; gravel/sand mixture(s); little or no fines	
	CLEAN SAND (Little or no fines)	GM	Silty gravel; gravel/sand/silt mixture(s)	
	SAND WITH FINES (Appreciable amount of fines)	GC	Clayey gravel; gravel/sand/clay mixture(s)	
SAND AND SANDY SOIL (More than 50% of coarse fraction passed through No. 4 sieve)	CLEAN SAND (Little or no fines)	SW	Well-graded sand; gravelly sand; little or no fines	
	SP	Poorly graded sand; gravelly sand; little or no fines		
	SM	Silty sand; sand/silt mixture(s)		
	SC	Clayey sand; sand/clay mixture(s)		
FINE-GRAINED SOIL (More than 50% of material is smaller than No. 200 sieve size)	SILT AND CLAY (Liquid Limit less than 50)	ML	Inorganic silt and very fine sand; rock flour; silty or clayey fine sand or clayey silt with slight plasticity	
	CL	Inorganic clay of low to medium plasticity; gravelly clay; sandy clay; silty clay; lean clay		
	OL	Organic silt; organic, silty clay of low plasticity		
	MH	Inorganic silt; micaceous or diatomaceous fine sand or silty soil		
	SILT AND CLAY (Liquid Limit greater than 50)	CH	Inorganic clay of high plasticity; fat clay	
	OH	Organic clay of medium to high plasticity; organic silt		
	HIGHLY ORGANIC SOIL	PT	Peat; humus; swamp soil with high organic content	
	OTHER	AC	Pavement; Asphalt or Concrete	

- Notes:
1. USCS letter symbols correspond to the symbols used by the Unified Soil Classification System and ASTM Classification methods. Dual letter symbols (e.g., SM-SP) for a sand or gravel indicate a soil with an estimated 5-15% fines. Multiple letter symbols (e.g., ML/CL) indicate borderline or multiple soil classifications.
  2. Soil classifications are based on the general approach presented in the *Standard Practice for Description and Identification of Soils /Visual-Manual Procedure*, as outlined in ASTM D2488. Where laboratory index testing has been conducted, soil classifications are based on the *Standard Test Method for Classification of Soils for Engineering Purposes*, as outlined in ASTM D2487.
  3. Soil description terminology is based on visual estimates (in the absence of laboratory test data) of the percentages of each soil type and is defined as follows: Primary Constituent: >50% - "GRAVEL," "SAND," "SILT," "CLAY," etc.  
Secondary Constituents: >30% and ≤50% - "very gravelly," "very sandy," "very silty," etc.  
>15% and ≤30% - "gravelly," "sandy," "silty," etc.  
Additional Constituents: >5% and ≤15% - "with gravel," "with sand," "with silt," etc.  
≤5% - "trace gravel," "trace sand," "trace silt," etc., or not noted.

SAMPLE NUMBER & INTERVAL		SAMPLER TYPE	
Sample Identification Number	1	Code	Description
Recovery Depth Interval	Sample Depth Interval	a	3.25-inch O.D., 2.42-inch I.D. Split Spoon Sampler
Sample Identification Number	1	b	2.00-inch O.D., 1.50-inch I.D. Split Spoon Sampler
Portion of Sample Retained for Archive or Analysis		c	Shelby Tube
		d	Grab Sample
		e	3.00-inch I.D. Core Barrel Sampler
		1	300-lb Hammer, 30-inch Drop
		2	140-lb Hammer, 30-inch Drop
		3	Pushed
		4	350-lb. Hammer, 30-inch Drop
			OTHER
			<input checked="" type="checkbox"/> ATD Approximate Water Elevation At Time of Drilling (ATD) <input type="checkbox"/> or On Date Noted



Soil Classification System and Key

Figure A-2

10000

TOLS005428

LANDAU ASSOCIATES, INC.  
P.O. Box 1029 / Edmonds, WA 98020-9129  
Phone: (206)778-0907 / FAX: (206)778-6409

Project # \_\_\_\_\_

Sample # \_\_\_\_\_

Date \_\_\_\_\_ Time \_\_\_\_\_

Site \_\_\_\_\_

Analysis \_\_\_\_\_

Sampler \_\_\_\_\_

Comments



Sample Container Label

Figure A-3

10000

TOLS005429

# Soil/Sediment Sample Collection Form

## SAMPLING DATA

Sample Type:  Soil  Sediment  Other \_\_\_\_\_

Sample Location: \_\_\_\_\_ Sample Depth (BGS): \_\_\_\_\_ ( Feet  Inches)

Sample Composited:  Horizontally Locations: \_\_\_\_\_  
 Vertically Depth Range: \_\_\_\_\_  
 Not Composited

GS Elevation (ft, MSL): \_\_\_\_\_

## SAMPLE COLLECTION

Sample Collected From:  Hand-Dug Hole  Test Pit  Boring  Catch Basin/Manhole  Other \_\_\_\_\_

Sample Collected With:  Bowl  Spoon  Split Barrel  Other \_\_\_\_\_

Made of:  Stainless Steel  Other \_\_\_\_\_

## SAMPLE DESCRIPTION

Sample Description (color, grain size, density, moisture, etc.):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## SAMPLE CONTAINER

SIZE	QUANTITY	TYPE	LABORATORY ANALYSIS
<input type="checkbox"/> 8-oz.	_____	<input type="checkbox"/> Glass <input type="checkbox"/> Plastic <input type="checkbox"/> Other	_____
<input type="checkbox"/> 4-oz.	_____	<input type="checkbox"/> Glass <input type="checkbox"/> Plastic <input type="checkbox"/> Other	_____
<input type="checkbox"/> Other	_____	<input type="checkbox"/> Glass <input type="checkbox"/> Plastic <input type="checkbox"/> Other	_____

## ADDITIONAL INFORMATION

Photo No. \_\_\_\_\_ Roll No. \_\_\_\_\_

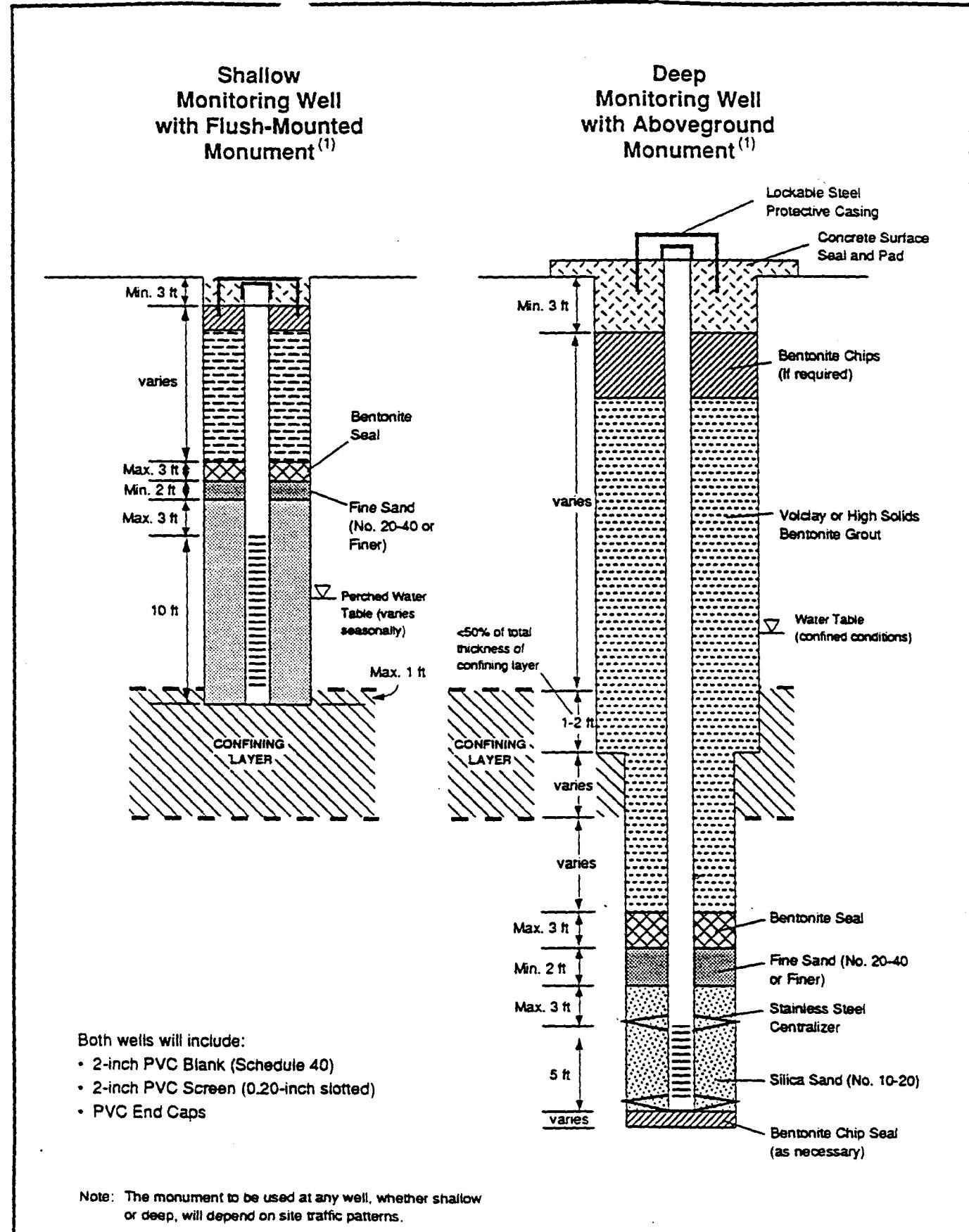
Duplicate Sample No(s). \_\_\_\_\_

Split Sample No(s). \_\_\_\_\_ Collector \_\_\_\_\_

Decon Procedure:  
 (By Numerical Order)  Tap Rinse  Alconox Wash  Tap Rinse  
 Hexane Rinse  DI Water Rinse  Other \_\_\_\_\_

Comments:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  Continued on Back





A

Typical Monitoring Well Design

Figure A-5

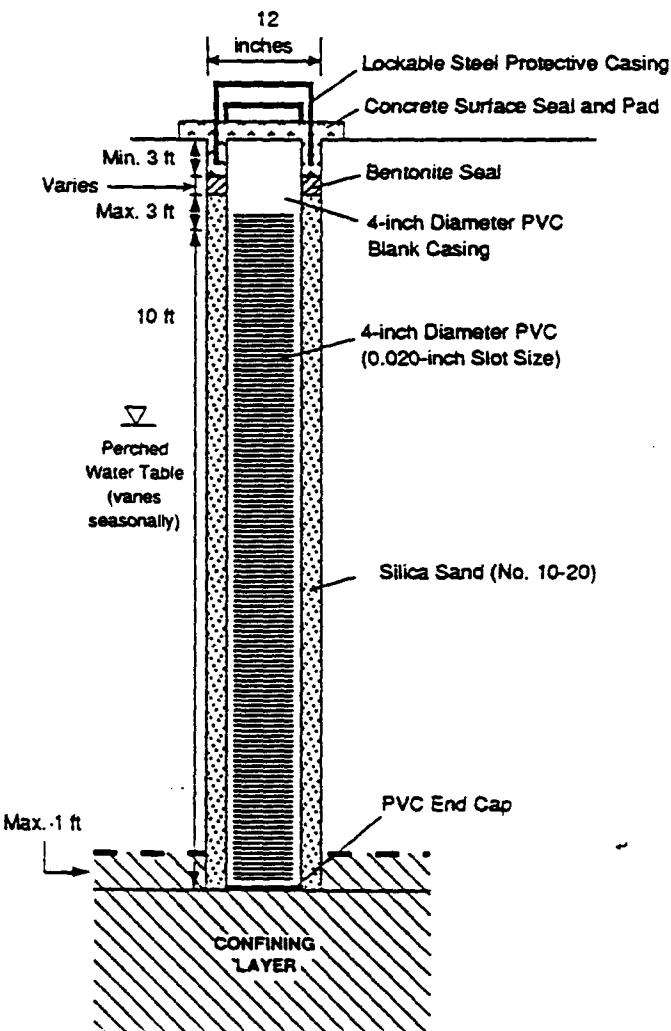
10000

TOLS005431

BZTO104(e)042252

## Monitoring Well LW2S

Shallow Monitoring Well  
with Aboveground Monument



231001.35 Time OHWW Terminal/RVFS Work Plan (M) 598

A

Monitoring Well Design for Well LW2S

Figure A-6

10000

TO-S005432

BZTO104(e)042253



LANDAU  
ASSOCIATES,  
INC.

# As-Built Well Completion Form

Exploration No.: \_\_\_\_\_  
Well No. (If different than Expl. No.): \_\_\_\_\_

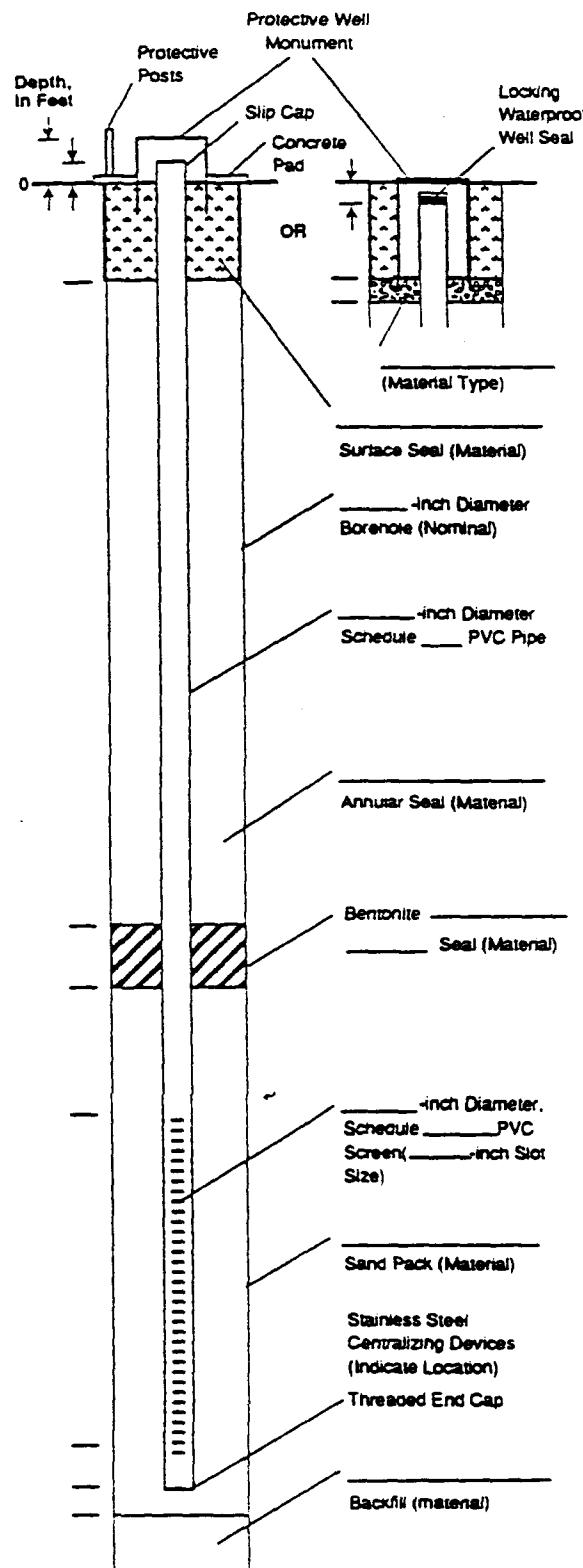
Client/Owner:	Project No.:
Project Name:	
Drilling Co.:	
LAI Rep(s):	
Installation Start Date:	Hour:
Installation Finish Date:	Hour:
Well Type:	<input type="checkbox"/> Single <input type="checkbox"/> Nested <input type="checkbox"/> Clustered

## BORING AND WELL DIMENSIONS AND INSTALLATION DETAILS

DOE Unique Well No.:	
Number of Pipes in Boring:	
Boring Diameter at Top of Hole:	
Does Diameter of Hole Change?	
Boring Diameter at First Step Down:	
Depth of First Step Down:	
Boring Diameter at Second Step Down:	
Depth of Second Step Down:	
Well Completion Date:	
Elevation of Well Cover:	
Elevation of Top of Well Pipe:	
Depth to Water:	
Date:	Time:

## MATERIALS USED

Sacks of	Sand
Sacks of	Concrete/Cement
Sacks of	Grout Mix Used
Sacks of	Bentonite Chips
Feet of	-inch PVC Blank Casing
Feet of	-inch PVC Slotted Screen
Threaded End Cap	
Waterproof Well Seal/Slip Cap	
Flush Mount/Aboveground Protective Monument	
Protective Posts	



10000

TOLS005433



# Well Development Record

Project Name: \_\_\_\_\_ Well No.: \_\_\_\_\_ Date: \_\_\_\_\_

Project No.: \_\_\_\_\_ LAI Representative: \_\_\_\_\_

Depth to Water: \_\_\_\_\_ Time: \_\_\_\_\_

Well Depth: \_\_\_\_\_

Casing Diameter: \_\_\_\_\_

Casing Volume (gal): \_\_\_\_\_

VOLUME OF SCHEDULE 40 PVC PIPE				
Casing Volume (Gal) = $\pi r^2 h \cdot 7.48$				
Where: $\pi = 3.1416$ , $r$ = radius in ft, $h$ = ft of water column				
Diameter (inch)	O.D. (inch)	I.D. (inch)	Volume (gal/linear ft.)	Wt. Water (lbs/linear ft.)
2	2.375	2.067	0.17	1.45
4	4.500	4.026	0.66	5.51

Method of Development: \_\_\_\_\_

Begin Development: Time \_\_\_\_\_

Finish Development: Time \_\_\_\_\_ Final Volume Purged (gal): \_\_\_\_\_

Initial Water Quality: (Turbidity, Color, Odor, Other) \_\_\_\_\_ Initial Yield: \_\_\_\_\_

Water Quality Notes: \_\_\_\_\_

Final Water Quality: (Turbidity, Color, Odor, Other) \_\_\_\_\_ Final Yield: \_\_\_\_\_

Depth to Water After Development: \_\_\_\_\_ Well Depth After Development: \_\_\_\_\_

Graphs 596



Well Development Record

Figure A-8

10000

TCLS005434

BZTO104(e)042255



LANDAU  
ASSOCIATES,  
INC.

## Water Level Measurements

Date \_\_\_\_\_

By \_\_\_\_\_

**Project Name/Client**

**Project No.** \_\_\_\_\_

\* From top of well casting.

\*\* Record relative positions of ground surface, well casing, and protective casing (monument cover) if elevation of well casing is unknown. Record Datum if known.

{M} 875



## Water Level Measurements

**Figure A-9**

TOLS005435

BZTO104(e)042256



LANDAU  
ASSOCIATES,  
INC.

PROJECT NAME \_\_\_\_\_

PROJECT NO. \_\_\_\_\_ EVENT \_\_\_\_\_

SAMPLE NO. \_\_\_\_\_

DATE COLLECTED \_\_\_\_\_ TIME \_\_\_\_\_

Weather \_\_\_\_\_

Collector(s) \_\_\_\_\_

## Groundwater/Surface Water Sample Collection Form

### WATER LEVEL/WELL/PURGE DATA

Sample Type:  Groundwater  Surface Water  Other \_\_\_\_\_

Sample Location: \_\_\_\_\_

Depth to Water (ft): \_\_\_\_\_ Time: \_\_\_\_\_ Measured from:  Top of Protective Casing  Top of Well Casing

Well Casing Type:  PVC  Stainless Steel  Fiberglass Casing Diameter: \_\_\_\_\_

Well Condition: Secure ( Yes /  No) Damaged ( Yes /  No) Describe \_\_\_\_\_

Begin Purge: Date/Time: \_\_\_\_\_ Casing Volume (gal): \_\_\_\_\_

End Purge: Date/Time: \_\_\_\_\_ Purge Volume (gal): \_\_\_\_\_

Total Depth of Well (ft. below top of well casing): \_\_\_\_\_

Purge Volume Calculation: \_\_\_\_\_

#### VOLUME OF SCHEDULE 40 PVC PIPE

Casing Volume (Gal) =  $\pi r^2 h \cdot 7.48$

Where:  $\pi = 3.1416$ ,  $r$  = radius in ft,  $h$  = ft of water column

Diameter O.D. ID. Volume Wt. Water

(inch) (inch) (inch) (gallons ft) (pounds ft)

2 2.375 2.067 0.17 1.45

4 4.500 4.026 0.66 5.51

Purge Water Disposal to:  55-gal Drum  Storage Tank  Ground  Other \_\_\_\_\_ Gallons Purged: \_\_\_\_\_

Time	Vol. Purged (gal)	pH	Temperature (°F/°C)	Conductivity	Comments/Observations
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Time	Vol. Purged (gal)	pH	Temperature (°F/°C)	Conductivity	Comments/Observations
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Time	Vol. Purged (gal)	pH	Temperature (°F/°C)	Conductivity	Comments/Observations
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

### SAMPLE COLLECTION DATA

Sample Collected With:  Bailer  Pump/Pump Type \_\_\_\_\_ Dedicated ( Yes /  No) \_\_\_\_\_

Made of:  Stainless Steel  PVC  Teflon  Polyethylene  Other \_\_\_\_\_

Decon Procedure:  Alconox Wash  Tap Rinse  DI Water  Other \_\_\_\_\_  Other \_\_\_\_\_  
(By Numerical Order)  
 Other \_\_\_\_\_

Sample Description (color, turbidity, odor, sheen, etc.): \_\_\_\_\_

Replicate	pH	Temperature (°F/°C)	Conductivity (µS)	Other
1	_____	_____	_____	_____
2	_____	_____	_____	_____
3	_____	_____	_____	_____
4	_____	_____	_____	_____

pH Meter: \_\_\_\_\_ Cond. Meter: \_\_\_\_\_ Cond. Range: \_\_\_\_\_ ATC:  On  Off

Meter Calibration Check: Ph7 Buffer Reads \_\_\_\_\_ at \_\_\_\_\_ °C after Sample Collection.

SIZE	QUANTITY	TYPE	FIELD FILTERED	LABORATORY ANALYSIS
				<input type="checkbox"/> Glass <input type="checkbox"/> Plastic <input type="checkbox"/> Yes / <input type="checkbox"/> No
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Duplicate Sample No(s). \_\_\_\_\_

Comments: \_\_\_\_\_

Continued on Back

Signature \_\_\_\_\_ Date \_\_\_\_\_



Groundwater/Surface Water Sample Collection Form

Figure A-10

10000

TCLS005436

100

**LANDAU ASSOCIATES, INC.**  
Edmonds, WA (206) 778-0907  
**FAX (206) 778-6409**

## **Chain-of-Custody Record**

Date \_\_\_\_\_

Project \_\_\_\_\_ Job No. \_\_\_\_\_

**Client** \_\_\_\_\_

**Project Location** \_\_\_\_\_

**Sampler's Name** \_\_\_\_\_

## Testing Parameters

Special Shipment/Handling or Storage Requirements	Method of Shipment		
Relinquished by	Received by	Relinquished by	Received by
Signature	Signature	Signature	Signature
Printed Name	Printed Name	Printed Name	Printed Name
Company	Company	Company	Company
Date _____ Time _____	Date _____ Time _____	Date _____ Time _____	Date _____ Time _____

30

WHITE COPY - Project File

**YELLOW COPY - Laboratory**

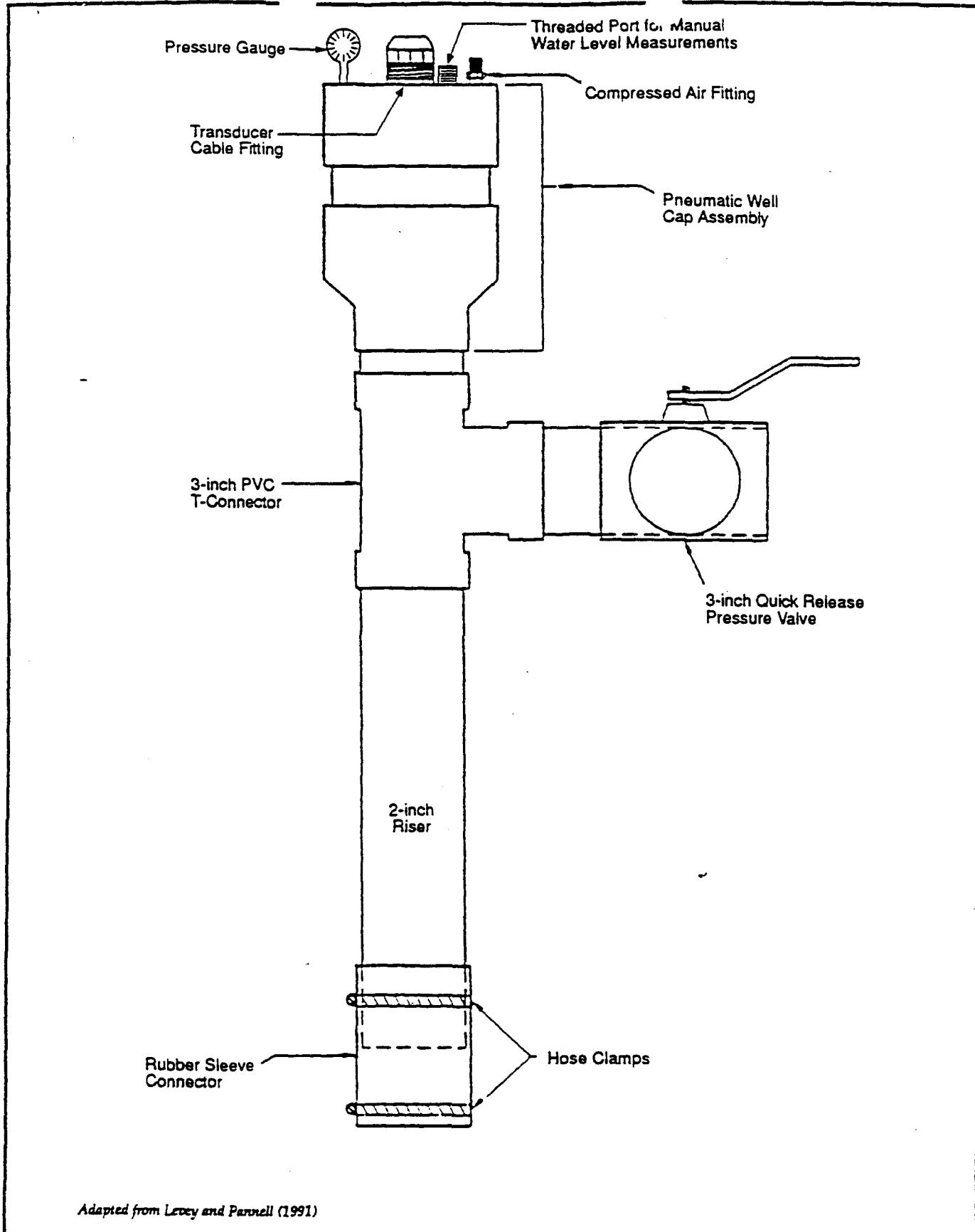
**PINK COPY - Client Representative**



## **Chain-of-Custody Record**

**Figure A-11**

TOLS005437



Adapted from Letey and Parnell (1991)

A

Pneumatic Well Head Assembly

Figure A-12

10000

TOLS005438

BZTO104(e)042259

Project: Time Oil  
Project No.: 231001

## **PHOTOGRAPH DOCUMENTATION FORM**

TOLS005439



## **Photograph Documentation Form**

Figure A-13

TABLE A-1  
SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES  
TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON

Matrix	Analytes	Sample Container	Preservation	Maximum Holding Times <sup>(a)</sup>
Soil/Dust	Chlorinated phenols	4 oz wide mouth glass with teflon liner	Cool to 4°C	10 days until extraction; 40 days after extraction
	Semivolatile organics	4 oz wide mouth glass with teflon liner	Cool to 4°C	14 days until extraction; 40 days after extraction
	Total petroleum hydrocarbons	4 oz wide mouth glass with teflon liner	Cool to 4°C	14 days until extraction; 21 days after extraction
	Volatile organics	1.5 oz wide mouth glass with teflon liner, or wide mouth glass sealed with a septum	Cool to 4°C No headspace	14 days
	PCBs	4 oz wide mouth glass with teflon liner	Cool to 4°C	14 days until extraction; 40 days after extraction
	Metals	4 oz wide mouth glass with teflon liner	Cool to 4°C	6 months
	Dioxins and furans	8 oz wide mouth glass with teflon liner	Cool to 4°C	30 days until extraction; 45 days after collection
	Total organic carbon	4 oz wide mouth glass with teflon liner		30 days
Groundwater	Chlorinated phenols	1 L amber glass; teflon-lined cap	Cool to 4°C	7 days until extraction; 40 days after extraction
	Semivolatile organics	3 each - 1 L amber glass; teflon-lined cap	Cool to 4°C	7 days until extraction; 40 days after extraction
	Total petroleum hydrocarbons	1 L glass, teflon-lined cap	5 mL HCl Cool to 4°C	7 days until extraction; 14 days after extraction
	Volatile organics	3 each - 40 mL glass vials; teflon-lined cap	HCl to pH<2 Cool to 4°C No headspace	14 days
	PCBs	4 each - 1 L amber glass; teflon-lined cap	Cool to 4°C pH 5 to 9	7 days until extraction; 40 days after extraction
	Metals	1 L high density polyethylene	HNO <sub>3</sub> to pH<2	6 months
	Dioxins and furans	2 each - 1 L amber glass; teflon-lined cap	Cool to 4°C	30 days until extraction; 45 days after extraction
	Major ions	1 L high density polyethylene, or glass	HNO <sub>3</sub> to pH<2	28 days

(a) Holding times are from date of collection unless otherwise specified.

10000

TOLS005440

**TABLE A-2**  
**PLANNED SOIL SAMPLE DEPTHS AND ANALYSES**  
**PHASE II REMEDIAL INVESTIGATION**

(e) Collection of nail samples for chemical analysis will be suspended. Phase II soil stockpiles and unremediated field screening results for the Phase II R1 based soil samples will be used to determine the set of chemical parameters for the remaining Phase II soil and groundwater samples.

Carbon size and total organic carbon analyses will be conducted on unashed core samples only.

vertical thermal insulation compared to very

Samples with the two highest concentrations of PCP, TPH, and PCBs, using the *monotomoy* technique will be sent to the laboratory.

(e) The laboratory for analysis will determine based on field observations and the field screening results for PCP.  
 (f) The actions for any additional dataset/layer analysis will be determined based on field observations and the field screening results for PCP.

The consuming unit may not be present at this location.

5

TOLS005441

BZTO104(e)042262

Monitoring Location				Initial Screening	Quarterly Chemical Analyses <sup>(a)</sup>						Priority Pollutant Metals	Major Ions
	Shallow Well	Shallow Well Point	Deep Well		PCP and TPH	Semivolatiles	Volatiles	Chlorinated Phenols	TPH-D	Dioxin/ Furan <sup>(b)</sup>		
1 <sup>(c)</sup>	✓	-	-	-	-	-	-	-	-	-	-	-
2	✓	-	-	-	✓	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
A	-	-	-	-	-	-	-	-	-	-	-	-
B	-	-	-	-	-	-	-	-	-	-	-	-
B1	-	-	-	-	-	-	-	-	-	-	-	✓
B2	-	-	-	-	-	-	-	-	-	-	-	✓
C	-	-	-	-	-	-	-	-	-	-	-	-
D	-	-	-	-	✓ <sup>(d)</sup>	-	-	-	-	-	-	✓
E <sup>(e)</sup>	-	-	-	-	-	-	-	-	-	-	-	-
G	-	-	-	-	-	-	-	-	-	-	-	-
G1A	-	-	-	-	✓	-	-	-	-	-	-	✓
H	-	-	-	-	✓	-	-	-	-	-	-	✓
I <sup>(f)</sup>	-	-	-	-	✓	-	-	-	-	-	-	-
J1	-	-	-	-	✓	-	-	-	-	-	-	✓
J2	-	-	-	-	✓	-	-	-	-	-	-	✓
J3	-	-	-	-	✓	-	-	-	-	-	-	✓
K	-	-	-	-	✓	-	-	-	-	-	-	✓
L	-	-	-	-	✓	-	-	-	-	-	-	✓
M	-	-	-	-	✓	-	-	-	-	-	-	✓
N	-	-	-	-	✓	-	-	-	-	-	-	-
O	-	-	-	-	✓	-	-	-	-	-	-	-
P	-	-	-	-	✓	-	-	-	-	-	-	-
Q	-	-	-	-	✓	-	-	-	-	-	-	-
R	-	-	-	-	✓	-	-	-	-	-	-	-
LW1S	-	-	-	-	✓	-	-	-	-	-	-	✓
LW1D	-	-	-	-	✓	-	-	-	-	-	-	✓
LW2S	-	-	-	-	✓	-	-	-	-	-	-	✓
LW3D	-	-	-	-	✓	-	-	-	-	-	-	✓
LW4S	-	-	-	-	✓	-	-	-	-	-	-	✓
LW4D	-	-	-	-	✓	-	-	-	-	-	-	✓
LW5S	-	-	-	-	✓	-	-	-	-	-	-	✓
LW6D	-	-	-	-	✓	-	-	-	-	-	-	✓

(a) The list of constituents may be modified based on Phase I RI soil stockpile results and Phase II RI biased soil results.

(b) The well locations for any additional dioxin/furan analyses will be determined following the first groundwater sampling event.

(c) Scheduled to be abandoned.

(d) Initial screening at this location also will include PCB screening analysis.

05/08/96 ENVIRONMETRICS A-3

an

TOLS005442

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## APPENDIX B

### QUALITY ASSURANCE PROJECT PLAN

#### 1.0 INTRODUCTION

This quality assurance project plan (QAPP) establishes the QA objectives for the remedial investigation (RI) at the Time Oil Northwest Terminal (the facility) in Portland, Oregon. This plan also presents the QA organization and quality control (QC) procedures developed to meet project QA objectives. These QA/QC procedures are intended to facilitate meeting project data quality objectives [DQOs, developed in accordance with the Oregon Department of Environmental Quality (DEQ) QA policy (DEQ 1990a) and U.S. Environmental Protection Agency (EPA) guidance documents (EPA 1983; 1987a,b; 1989a)] and generating data that are representative of actual conditions at the facility. The goal of the project QA program is to provide a reasonable degree of confidence in project data and results by establishing a system of quality and performance checks on data collection, analysis, and reporting activities, as well as to provide for appropriate and timely corrective action to achieve compliance with established performance and quality criteria.

The QAPP is divided into the following sections:

- Section 2.0 - Project QA organization and responsibilities
- Section 3.0 - Data quality objectives
- Section 4.0 - Sampling, documentation, and custody procedures
- Section 5.0 - Preventive maintenance/calibration procedures
- Section 6.0 - Analytical procedures
- Section 7.0 - Field screening methods
- Section 8.0 - Data reduction, validation, and reporting
- Section 9.0 - Internal quality control
- Section 10.0 - Specific routine procedures used to assess data
- Section 11.0 - Performance and system audits

- Section 12.0 - Corrective actions
- Section 13.0 - Reporting
- Section 14.0 - References.

## 2.0 PROJECT QA ORGANIZATION AND RESPONSIBILITIES

The project QA organization for evaluation of quality assurance during RI activities is shown on Figure B-1. Specific project QA responsibilities are listed in Table B-1. The QA task leader will be responsible for QA oversight during RI activities including sampling events, analytical laboratory coordination, and direct implementation of this QAPP. The QA officer will be responsible for directing/conducting data validation and for confirming that the QA objectives of the project are met. The project manager is responsible for overall implementation of this QAPP. Laboratory analyses will be performed by Analytical Resources, Inc. (ARI), 333 9th Avenue N., Seattle, Washington 98109 (206-621-6490), and for dioxin/furan analysis, Twin City Testing Corporation (TCT), 737 Pelham Blvd., St. Paul, Minnesota 55114 (612-645-3601). These laboratories have the facilities, equipment, staff, and QA/QC program and procedures to perform sample analyses in support of this QAPP and in accordance with the DEQ QA policy (DEQ 1990a).

## 3.0 DATA QUALITY OBJECTIVES

The overall objective of the QA/QC program is to establish confidence that project data are of known and appropriate quality and sufficient to support their intended use. To accomplish this goal, project data should be technically sound, statistically valid, and properly documented (EPA 1988a), having been evaluated against established criteria for precision, accuracy, representativeness, completeness, and comparability (PARCC), as defined in EPA guidance (1988a).

The QA procedures presented in this QAPP are based on DQOs that were developed in accordance with DEQ (1990a) and EPA (1987a,b) guidance documents and reflect the intended use of project data. The project DQOs (summarized in Table B-2) prescribe the sampling program design (e.g., type of analysis, sampling protocols) and the level of quality, precision, accuracy, representativeness, completeness, and comparability of data to be collected and analyzed for RI activities.

Based on previous site data, certain compounds have been identified as potential constituents of concern at the site (Section 2.5 of the work plan). The data objectives for the RI are to further characterize documented or suspected areas of contamination and to determine the nature and extent of contamination in soil and groundwater in these areas resulting from previous activities at the facility. These data objectives will be accomplished by conducting chemical analyses on soil and groundwater samples (and dust samples from the former PCP warehouse) using standard analytical laboratory methods (EPA 1986, updated 1995) and immunoassay field screening methods for selected compounds.

The analytical level data quality objective for data generated by ARI and TCT will be Level III (DEQ 1990a) or non-Contract Laboratory Program (CLP)-RAS. Level III non-CLP-RAS refers to the use of standard EPA-approved methods (EPA 1986, updated 1995) with the level of data quality comparable to that obtained from the use of CLP methods (EPA 1994a,b), with the exception of the level of documentation required with submittal of the analytical results from the laboratories. The documentation and validation procedures established in this QAPP are sufficient to achieve non-CLP-RAS data quality and, therefore, sufficient to support the appropriate conclusions about the data and support the objectives of the RI.

The analytical level data quality objective of data generated by immunoassay field screening methods will be Level II (DEQ 1990a). Level II refers to use of EPA-approved or accepted field analytical methods that can identify constituents, but the actual concentrations may not be quantified with a high degree of accuracy. The field analytical data will be used to make decisions regarding the necessity of additional characterization and to make early decisions on whether the rationale used to design the RI sampling program will address the RI data objectives. Data precision will be evaluated through the use of field duplicates, representativeness will be evaluated by analyzing method blanks, and comparability will be evaluated by conducting confirmation analyses at the analytical laboratory. The procedures established in this QAPP are considered sufficient to achieve the appropriate data quality for the intended use of the data, and therefore, sufficient to support the objectives of the RI.

The target control limits (the range within which project data of acceptable quality should fall) for the PARCC parameters are presented in Tables B-3 and B-4. The target control limits will be used to evaluate data acceptability as noted in Section 10.0. The control limits listed in these tables are considered to be QC goals for data acceptance. Field and laboratory precision will be determined through the collection and analysis of duplicate samples. Laboratory accuracy will be

determined through the use of laboratory spiked samples. In field duplicates, both field variability and laboratory variability are potential sources of error; therefore, both will be considered in any investigation of relative percent difference (RPD) values outside the target control limits. Data acceptability will be determined on the basis of the results of this qualitative review of error sources and, therefore, will be case specific.

The QA objective for representativeness, completeness, and comparability will be achieved by:

- Collecting samples from areas known or suspected to be contaminated, thereby adequately characterizing analyte concentrations (biased locations)
- Collecting samples that have been located to provide representative distribution of the data (random locations)
- Implementing standardized, uniform field procedures (see Appendix A)
- Collecting field equipment blanks for nondedicated equipment and analyzing laboratory method blanks to verify that the analytical results are representative of the sampled item and not influenced by cross contamination
- Reporting data in conventional and standard units.

PARCC parameters are defined and discussed further in Section 10.0.

Quantitation limits will generally equal those listed in the standard EPA methods (EPA 1986, updated 1995) or those currently achievable for laboratory data depending on effects by matrix interferences. The RI quantitation limits are presented in Table B-5. Project quantitation limits have been lowered by analytical method modifications, where practical, to accommodate use of the data in human and environmental risk assessments; however, for some constituents the risk associated with the quantitation limit will still exceed  $1 \times 10^{-6}$ .

#### 4.0 SAMPLING, DOCUMENTATION, AND CUSTODY PROCEDURES

Sampling procedures and protocols for each sampling activity were developed to meet the project data quality objectives and are based on proven and acceptable sampling methods as established by EPA guidance documents, Oregon State regulations, and professional judgment.

Sampling, documentation, and custody procedures include the following elements:

- Sampling methods, including identification of sampling equipment, purging procedures, and decontamination procedures to be used.

- Criteria for determining the type of sampling (e.g., discrete, continuous).
- Sample containers, preservation, and holding times.
- Measures to be taken to prevent contamination of the sampling equipment and cross contamination between sampling points.
- Sample preservation methods.
- Chain-of-custody procedures.

A description of sampling, documentation, custody procedures, and sampling locations for RI activities are presented in Appendix A.

## 5.0 PREVENTIVE MAINTENANCE/CALIBRATION PROCEDURES

Laboratory and field instruments will be properly operated, calibrated, and maintained by qualified personnel according to the manufacturer's guidelines and recommendations, as well as criteria in the analytical method. Documentation of routine and special preventive maintenance and calibration information will be maintained in a field or laboratory logbook or reference file and will be available upon request. Each maintenance and calibration logbook entry will include the date and initials of the individual performing the activity. The subsections below summarize preventive maintenance and calibration procedures for field and laboratory instruments.

### 5.1 FIELD INSTRUMENTS

Periodic schedules for preventive maintenance of field instruments, including equipment testing, parts replacement, and general cleaning will be followed according to the manufacturer's instructions. Field equipment performance will be evaluated against check standards and calibration blanks, as appropriate, for each parameter before use and at least once during a sampling day or when meter drift is suspected. Field instruments used during RI activities requiring calibration will include water level indicators, pH and conductivity meters for groundwater sampling events, and a photoionization detector (i.e., Microtip) that will be used for health and safety air monitoring purposes during soil and groundwater sampling events.

## 5.2 LABORATORY INSTRUMENTS

The analytical laboratory project manager is responsible for maintaining laboratory instruments in proper working order, including routine maintenance and calibration and training of personnel in maintenance and calibration procedures. Laboratory instruments will be properly calibrated with appropriate check standards and calibration blanks for each parameter before beginning each analysis. Instrument performance check standards, where required, and calibration blank results will be recorded in a laboratory logbook dedicated to each instrument. At a minimum, the preventive maintenance schedules contained in the EPA methods and in the equipment manufacturer's instructions will be followed. Laboratory calibration procedures and schedules will be as described in the laboratory QAPPs. ARI's laboratory QAPP has been submitted to DEQ; TCT's laboratory QAPP will be available for review by DEQ upon request.

## 6.0 ANALYTICAL PROCEDURES

Laboratory analyses performed on soil, groundwater, and dust samples collected during RI activities will include: semivolatiles, volatiles, chlorinated phenols, total petroleum hydrocarbon (TPH), priority pollutant (PP) metals, polychlorinated biphenyls (PCBs), and dioxin/furans.

Laboratory chemical analyses for all constituents (except for dioxins/furans) will be conducted by ARI. Laboratory analyses for dioxin/furan analyses will be conducted by TCT. Both laboratories are qualified to perform the analyses using standard, documented laboratory analytical procedures. The laboratory QAPPs and standard operating procedures (SOPs) provide data quality procedures according to the protocols for the analytical method and cleanup steps. The data quality procedures are at a level sufficient to meet the sampling program DQOs; the laboratory QAPP and SOPs can be provided upon request. Analytical methods and associated extraction procedures are listed in Table B-6.

The analytes and quantitation limits for soil and water for each analytical procedure are listed in Table B-5. As discussed before, some of the project quantitation limits have been lowered by analytical method modifications. The quantitation limits listed are only goals because instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired quantitation limits and associated QC criteria. If this occurs, the laboratory will report the reason(s) for deviations from these quantitation limits or noncompliance with QC criteria.

## **7.0 FIELD SCREENING METHODS**

Immunoassay field screening analysis will be conducted on groundwater and soil samples during RI activities using EPA approved or accepted methods for PCP, TPH, and PCBs. The method numbers are listed in Table B-6. Field analytical methods will be conducted by an experienced technician who has used the proposed instrumentation under field conditions. The analytical and data quality procedures will be performed in accordance with the protocols of the methods and at a level to meet the sampling program DQOs. The method quantitation limits for soil and water for the field screening analytical procedures are listed in Table B-5. It is anticipated that 1 to 2 concentration ranges will be evaluated for each analysis.

## **8.0 DATA REDUCTION, VALIDATION, AND REPORTING**

Analytical reports from the laboratory for this project will be accompanied by QC results and any other necessary analytical information to enable reviewers to determine the quality of the data. The Landau Associates QA officer or QA task leader will be responsible to the project manager for conducting checks for adherence to the QC elements specified in this QAPP. The Landau Associates QA officer (or designee) will prepare a laboratory data validation report, as described below. If significant nonconformities are found, additional laboratory data will be evaluated by the Landau Associates QA officer.

Analytical data for the specific tasks will be reported in the units specified by the quantitation limits as listed in Table B-5. These units have been selected to provide for comparability of the data with previously generated relevant facility data.

The analytical laboratories will provide reports that will include the following elements:

- Case narrative, including adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies
- Sample analytical results
- Surrogate recoveries
- Matrix spike/matrix spike duplicate results
- Laboratory duplicate results
- Blank results

- Sample custody (including signed, original chain-of-custody records, and documentation of condition of custody seals)
- Analytical responsibility.

The analytical laboratory will routinely archive raw laboratory data, including initial and continuing calibration data, chromatograms, quantitation reports, blank sheets, and sampling logs, in addition to those deliverables listed above, if requested by the Landau Associates QA officer or QA task leader.

Data validation will be performed based on data in analytical laboratory report packages obtained as part of the RI. Validation will be performed according to portions of the EPA guidelines on data validation (EPA 1994a,b) and will include evaluations of the following QA components:

- Chain-of-custody records
- Holding times
- Field blanks
- Laboratory method blanks
- Surrogate recoveries
- Laboratory matrix spikes and matrix spike duplicates
- Laboratory duplicates
- Field duplicates
- Corrective action records
- Completeness
- Overall assessment of data quality.

Section 10.0 presents statistical tests used to determine data precision, accuracy, and completeness during data evaluation and validation. If a portion of the data is outside the limits specified in Tables B-3 or B-4, or in EPA guidelines (EPA 1994a,b), or if sample collection and/or documentation practices are deficient, corrective action(s) will be initiated. Corrective action, as

described in Section 12.0, will be determined by the QA task leader and Landau Associates QA officer in consultation with the project manager and may include any of the following responses:

- Rejection of the data and resampling
- Qualification of the data
- Modification of field and/or laboratory procedures.

Data qualification arising from data validation activities will be described in the data validation report, rather than in individual corrective action reports.

## 9.0 INTERNAL QUALITY CONTROL

Internal quality control will be accomplished through specific QC samples collected and/or measurements taken in the field and laboratory. The QC samples are used to evaluate precision, accuracy, representativeness, completeness, and comparability of the analytical results for this project (see detailed discussion of these parameters in Section 10.0). Analytical methods (referenced in Table B-6) specify routine procedures required to evaluate if data are within proper QC limits. Additional internal QC includes collection and analysis of a number of field and laboratory QC samples, which are described in the following subsections.

Field and laboratory QC samples will be used to evaluate data validity and representativeness. Field and laboratory QC samples will include blind field duplicates, field equipment blanks, field trip blanks, laboratory matrix or method spikes, laboratory matrix spike duplicates, laboratory duplicates, and laboratory method blanks.

A sampling event, as defined for the purpose of QC sample frequency, consists of a set of groundwater samples of similar matrix, collected within a regularly scheduled quarterly event or a set of soil samples collected within a 14 (calendar) day period. The following sections describe the types of field and laboratory QA samples.

### 9.1 BLIND FIELD DUPLICATE

Blind field duplicates for soil, groundwater, and dust will consist of a split sample collected at a single sample location. The blind field duplicates will be given a separate sample number that cannot be associated by the laboratory to the specific sample location. Soil samples to be analyzed for volatiles will be collected from co-located areas within the same depth interval and placed

directly into separate sample containers immediately following collection. Soil samples for all other analyses, including samples for field screening analyses, will be collected from the same depth interval, homogenized by mixing in a stainless steel bowl, and split into duplicate sample containers. Duplicate groundwater samples will be collected by alternately filling sample containers for both the original and the corresponding duplicate sample at the same location to decrease variability between duplicates. Blind field duplicates will be collected at a frequency of one per 20 samples, not including QC samples, but not less than one duplicate per sampling event per matrix (soil and groundwater).

## 9.2 FIELD EQUIPMENT BLANKS

Field equipment blanks will be collected to evaluate the effectiveness of sampling equipment decontamination procedures and the potential for equipment or field cross contamination where undedicated sampling equipment is used. Field equipment blanks for soil samples will consist of clean soil or wipe equipment blanks and will be collected for analyses performed on soil samples (except for volatiles; see below). The wipe equipment blank samples will be prepared by a licensed laboratory and will consist of a contaminant-free ("clean") soil or contaminant-free fabric (such as gauze or cheesecloth) saturated with pesticide-grade hexane placed in separate, marked, pre-cleaned containers. (Wipe blanks will not be collected for TPH samples because of the difficulty of preparing TPH-free wipe materials.) The solvent-saturated wipe will be used to wipe the surfaces of the sampling equipment and will be returned to the original sample container. Wipe equipment blank samples will remain sealed in the container until sample collection is performed. Clean soil equipment blanks will be collected by placing clean soil in a decontaminated stainless steel bowl that actually contacted the soil samples and following the exact sampling procedure used for RI soil samples (see Appendix A). Field equipment blanks will be collected at a frequency of at least one per 20 soil samples, not including QC samples, but not less than one soil equipment blank per sampling event.

Field equipment rinsate blanks will be collected for analyses performed on groundwater samples and for soil samples analyzed for volatiles. The rinsate blanks will be collected by pouring deionized water (supplied by the analytical laboratory) over or through decontaminated sampling equipment and collected in the appropriate sample containers. Equipment surfaces exposed during actual sampling will be rinsed. No rinsate blanks will be collected from dedicated or disposable field equipment. Field equipment rinsate blanks will be collected at a rate of one blank per 20

samples per sample type (i.e., soil and groundwater), not including QC samples, but not less than one blank per sampling event.

### **9.3 FIELD TRIP BLANK**

Field trip blanks will consist of deionized water sealed in a sample container by the analytical laboratory. The trip blank will be transported to and from the field, then returned to the laboratory unopened for analysis. One trip blank per cooler containing samples for volatile organic analysis will be evaluated to determine possible sample contamination during transport.

### **9.4 LABORATORY MATRIX SPIKE**

For each sample matrix (soil, groundwater, and dust), a minimum of one laboratory matrix spike per 20 samples, not including QC samples, or one matrix spike sample per sampling event, if fewer than 20 samples are obtained, will be analyzed for all constituents. Spiking compounds and associated control limits are listed in Table B-3. These analyses will be performed to provide information on accuracy and to verify that extraction and concentration levels are acceptable. The laboratory spikes will follow EPA guidance for matrix spikes.

### **9.5 LABORATORY MATRIX SPIKE DUPLICATE OR LABORATORY DUPLICATE**

For each sample matrix (soil, groundwater, and dust), a minimum of one laboratory matrix spike duplicate (for organic analysis) or one laboratory duplicate (for inorganic analysis) per 20 samples, not including QC samples, or one matrix spike sample per sampling event, if fewer than 20 samples are obtained, will be analyzed for all constituents. Spiking compounds and associated control limits for each analysis are listed in Table B-3. These analyses will be performed to provide information on the precision of chemical analyses. The laboratory spikes will follow EPA guidance for matrix spike duplicates.

### **9.6 LABORATORY OR FIELD METHOD BLANKS**

A minimum of one laboratory or field method blank per 20 samples, or one every 12 hours, or one per batch of samples analyzed (if fewer than 20 samples are analyzed) will be analyzed for all parameters conducted for standard analytical methods and field screening methods to assess

possible cross contamination introduced during the analysis. Dilution water will be used whenever possible and appropriate. Laboratory and field method blanks will contain the same reagents used for the associated sample analysis. The generation and analysis of additional method, reagent, and glassware blanks may be necessary to verify that analysis procedures do not contaminate samples.

## 9.7 CONFIRMATION SAMPLES

For each sample matrix (soil and groundwater), a minimum of one confirmation sample per 20 samples analyzed by immunoassay field screening analytical methods, not including QC samples, will be analyzed at the offsite analytical laboratory. At least one confirmation sample will be analyzed if fewer than 20 samples are analyzed during a sampling event. The confirmation samples will be used to assess comparability of field analysis with laboratory results. The analytical laboratory QC procedures presented in the previous sections will be followed for the confirmation analyses.

# 10.0 SPECIFIC ROUTINE PROCEDURES USED TO ASSESS DATA

Analytical laboratory data will be reviewed to confirm that the QA/QC objectives for the PARCC parameters are met. The PARCC parameters and the associated statistical tests used in their evaluation are included in the following sections.

## 10.1 PRECISION

Precision is a measure of "the reproducibility of analyses under a given set of conditions" (EPA 1988a). Precision is best expressed in terms of the standard deviation or relative percent difference (RPD). QA/QC sample types that test precision include field and laboratory duplicates and matrix spike duplicates. The estimate of precision of duplicate measurements will be expressed as an RPD, which is calculated:

$$RPD = \left| \frac{D_1 - D_2}{(D_1 + D_2)/2} \right| \times 100$$

where:  $D_1$  = first sample value  
 $D_2$  = second sample value (duplicate)

The RPDs for laboratory duplicates and matrix spike duplicates will be routinely calculated and compared with DQO control limits as listed in Table B-3. For field duplicates, RPD control limits

will be 20 percent for groundwater and 35 percent for soil or dust. If duplicate sample values are within 5 times the quantitation limit, then the control limit interval will be plus or minus the quantitation limit for water, and plus or minus 2 times the quantitation limit for soil or dust.

## 10.2 ACCURACY

Accuracy is a measure of "the bias in a measurement system" (EPA 1988a). Numerically, accuracy can be described as an average of measurements of the same property X, with an accepted reference or true value T, usually expressed as the difference between the two values (X-T), the difference as a percentage of the reference or true value (100 (X-T)/T), or as a ratio (X/T). Accuracy is expressed as the percent recovery of spiked (matrix or surrogate spike) samples:

$$\frac{\text{Percent Recovery}}{\text{}} = \frac{(\text{Total Analyte Found})}{\text{Analyte Added}} \times 100$$

The percent recovery will be routinely calculated and checked against DQO control limits as listed in Tables B-3 and B-4.

The accuracy of the major ion data for groundwater will be checked by calculating the charge-balance error:

$$\frac{\text{Error}}{\text{}} = \frac{\sum \text{cations} - \sum \text{anions}}{\sum \text{cations} + \sum \text{anions}} \times 100$$

where the concentration of cations and anions are expressed in milliequivalents per liter. If the error is greater than  $\pm 5$  percent, the data will not be used quantitatively in the RI evaluation.

## 10.3 REPRESENTATIVENESS

Representativeness expresses "the degree to which data accurately and precisely represent selected characteristics" (EPA 1988a). Representativeness can be evaluated using replicate samples, additional sampling locations, and blanks. Representativeness for the project will be monitored as outlined in Section 3.0.

## **10.4 COMPLETENESS**

Completeness is a measure of "the amount of valid data obtained from a measurement system compared to the amount that could be expected to be obtained under 'normal' conditions" (EPA 1988a). Completeness is calculated as the number of valid (i.e., nonrejected) data points divided by the total number of data points requested. Completeness will be routinely determined and compared to the DQO acceptable percentage of 90 percent, as listed in Table B-2.

## **10.5 COMPARABILITY**

Comparability is the "degree of confidence with which one data set can be compared to another" (EPA 1988a). QA procedures in this plan will provide for measurements that are consistent and representative of the media and conditions measured. All sampling procedures and analytical methods used for RI activities will be consistent to provide comparability of results for samples and split samples. Data collected under this QAPP also will be calculated, qualified, and reported in units consistent with EPA guidelines. Quantitation limits are listed in Table B-5, and QC samples are described in Section 9.0. For the field analytical methods, comparability will be evaluated by submitting confirmation samples to the analytical laboratory.

## **11.0 PERFORMANCE AND SYSTEM AUDITS**

Internal performance and /or system audits will not be conducted as part of the RI activities.

## **12.0 CORRECTIVE ACTIONS**

Corrective actions will be required if there are deviations from the methods or QA requirements established in this QAPP or if there are equipment or analytical malfunctions. Corrective action procedures will be implemented based on the type of unacceptable data and will be developed on a case-by-case basis. The following corrective actions may be included:

- Altering procedures in the field
- Using a different batch of sample containers
- Performing an audit of field or laboratory procedures
- Reanalyzing samples (if holding times allow)
- Resampling

- Evaluating sampling and analytical procedures to determine possible causes of the discrepancies
- Accepting the data with no action, acknowledging the level of uncertainty
- Rejecting the data as unusable.

During field operations and sampling procedures, the field personnel will be responsible for conducting and reporting required corrective action. A description of any corrective action taken will be entered in the daily field notebook. If field conditions do not allow for conformance with this QAPP, the Landau Associates project manager and/or QA task leader will be consulted immediately. For any corrective action or field condition resulting in a revision of this QAPP, the QA task leader will consult with the Landau Associates QA officer, who will authorize changes or exceptions to the QAPP, as necessary and appropriate.

During laboratory analysis, the laboratory QA officer will be responsible for taking required corrective actions in response to equipment malfunctions. If an analysis does not meet data quality goals outlined in this QAPP, corrective action generally will follow the guidelines in the EPA analytical methods noted in this QAPP and the EPA guidelines for data validation (EPA 1994a,b). If analytical conditions are such that nonconformance with this QAPP is indicated, the Landau Associates QA officer and/or QA task leader will be notified as soon as possible so that any additional corrective actions can be taken.

Corrective action reports will be used to document responses to reported nonconformances. These reports may be generated from internal or external audits or from informal reviews of project activities. Corrective action reports will be reviewed initially for appropriateness of recommendations and actions by the Landau Associates QA officer (for QA matters) and by the Landau Associates project manager (for technical approach). The Landau Associates project manager and Landau Associates QA officer jointly will define responsibilities for scheduling, performing, documenting, and assessing the effectiveness of the required action. As appropriate, the corrective action reports also may be submitted to Time Oil and DEQ for review and approval. The Landau Associates QA officer ultimately is responsible for implementation of appropriate corrective action and maintenance of a complete record of QC issues and corrective actions.

The Landau Associates QA officer will keep the Landau Associates project manager informed of significant deviations from the QAPP due to equipment or analytical malfunctions and any corrective action reports written for this project.

## 13.0 REPORTING

QA reports will include analysis reports from the laboratory and corrective action reports from the Landau Associates QA officer. All reports required under this QAPP will be submitted to the project manager or QA task leader.

### 13.1 LABORATORY REPORTS

The laboratory project manager from each laboratory will transmit written reports that summarize the test procedures and provide test results and QC data required for validation, as well as the elements listed in Section 8.0. Laboratory reports and analysis results will be signed by the laboratory project manager and submitted in data packages to the Time Oil project coordinator and the Landau Associates project manager or QA task leader.

### 13.2 QUALITY ASSURANCE REPORTS

Reports of significant QA deficiencies will be provided immediately to the Landau Associates QA officer by the QA task leader upon discovery. Verbal notice will be followed with written documentation through a memorandum and a corrective action report. The Landau Associates QA officer will be responsible for reporting QA problems to the project manager.

All reported data will include results of the QA data validation review and conclusions containing information regarding data accuracy, precision, completeness, and any corrective action and sampling procedure alteration documentation. Data validation results will be appended to the RI report in accordance with Section 8.0 and, therefore, will not be published in a separate data validation report.

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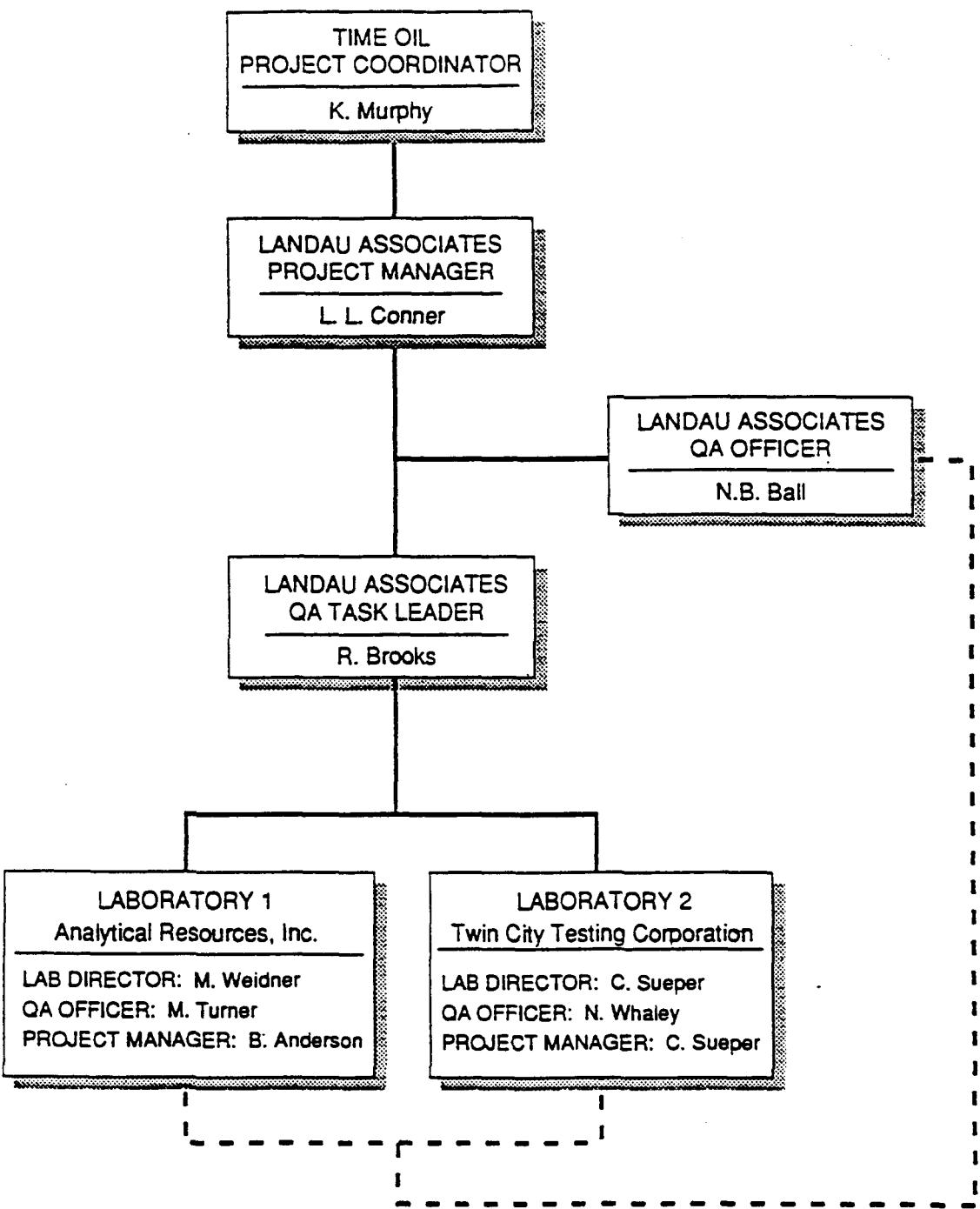
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Project Quality Assurance Organization

Figure B-1

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TABLE B-1

**QUALITY ASSURANCE RESPONSIBILITIES**  
**TIME OIL CO. NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

<u>Personnel</u>	<u>Responsibilities</u>
Kevin Murphy Project Coordinator Time Oil Co.	Provides technical project direction and coordinates project-agency communication or liaison; reviews project QA needs and approves appropriate QA corrective actions as required
Leslee L. Conner Project Manager Landau Associates, Inc.	Directs and supervises project technical team activities to successfully accomplish technical and QA project objectives; reviews project QA requirements and activities; and approves appropriate QA corrective actions
Nancy B. Ball, Ph.D. QA Officer Landau Associates, Inc.	Assists project manager in the establishment and review of project QA requirements and activities; recommends and reviews corrective action responses and deviations from the QAPP; directs or performs data validation; prepares data validation reports; and reviews QA reports
Rebekah Brooks QA/QC Task Leader Landau Associates, Inc.	Provides technical QA assistance; direct implementation of QAPP; prepares QA reports; and provides corrective action response
Michelle Turner, ARI Nancy Whaley, TCT Laboratory QA Officers	Directs and supervises laboratory implementation of QA/QC protocols so that QA objectives are met and properly documented and laboratory QA/QC information is reported
Bryan D. Anderson, ARI Chuck Sueper, TCT Laboratory Project Managers	Directs and supervises laboratory analytical activities; verifies adherence to project specifications and QA objectives; confirms that technical, financial, and scheduling objectives are achieved.

TABLE B-2  
DATA QUALITY OBJECTIVES FOR RI SAMPLING PROGRAMS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

DQO Parameter	RI Sampling Programs
Data users	Time Oil, DEQ
Data use/decision	Monitoring/characterization/necessity of remedial action
Data type	Concentrations of constituents of concern <sup>(a)</sup>
Data quality objectives <sup>(b)</sup>	
Analytical level	Level III (non-CLP-RAS) <sup>(c)</sup> Level II (field screening methods only)
QA Goals	
Precision <sup>(d)(e)</sup>	Matrix spike and laboratory duplicates Field duplicates
Accuracy <sup>(d)(e)</sup>	Matrix and surrogate spikes
Representativeness <sup>(d)</sup>	Field and laboratory blanks <sup>(f)</sup> Sampling protocols <sup>(g)</sup>
Completeness <sup>(d)</sup>	90 percent
Comparability	Confirmation samples (field screening methods only)
Quantitation limits <sup>(h)</sup>	As presented in Table B-5

- (a) Potential constituents of concern are identified in Section 2.5 of the work plan.
- (b) Developed in accordance with DEQ (1990a) and EPA (1987a,b; 1989a) guidance documents.
- (c) The Level III and Level II analytical levels are discussed in Section 3.0 of this QAPP.
- (d) Criteria for the evaluation of precision, accuracy, representativeness, and completeness are discussed in Section 10.0 of this QAPP.
- (e) Control limits for evaluation of precision and accuracy for project analytes are listed in Tables B-3 and B-4.
- (f) Blank concentrations will be monitored and corrective action determined on a case-by-case basis, as described in Section 12.0 of this QAPP.
- (g) Sampling protocols will be monitored for adherence to the sampling procedures discussed in Appendix A; corrective action will be determined on a case-by-case basis.
- (h) Quantitation limits may be affected by matrix interferences. Values are based on current laboratory data.

TABLE B-3  
 MATRIX SPIKE RECOVERY CONTROL LIMITS  
 TIME OIL CO. NORTHWEST TERMINAL  
 PORTLAND, OREGON

Analysis (Method)	Matrix Spike Compound	Recovery Control Limits (%) <sup>(a)</sup>		RPD (%) <sup>(b)(c)</sup>	
		Water	Soil	Water	Soil
<b>Chlorinated phenols (modified 8040)</b>					
Pentachlorophenol		45-130	45-130	35	35
<b>Volatiles (8260)</b>					
1,1-Dichloroethene		65-151	46-160	30	30
Trichloroethene		77-143	49-160	30	30
Chlorobenzene		87-141	87-143	30	30
Toluene		87-138	66-160	30	30
Benzene		79-141	83-158	30	30
<b>Semivolatiles (8270)</b>					
1,2,4-Trichlorobenzene		47-105	34-110	30	30
Acenaphthene		39-128	41-119	30	30
2,4-Dinitrotoluene		24-134	40-152	30	30
Pyrene		26-150	10-162	30	30
N-Nitroso-di-n-propylamine		39-121	38-122	30	30
1,4-Dichlorobenzene		41-106	33-103	30	30
Pentachlorophenol		10-138	10-125	30	30
Phenol		10-126	18-150	30	30
2-Chlorophenol		10-141	21-124	30	30
4-Chloro-3-Methylphenol		10-165	37-141	30	30
4-Nitrophenol		24-134	12-206	30	30
<b>Polychlorinated biphenyls (8081)</b>					
Aroclor 1242		30-160	30-133	30	30
<b>Metals (6010/7000) and major ions<sup>(d)</sup></b>		75-125	75-125	20	20
<b>Dioxins and furans (8290)</b>					
All tetra-, penta-, and hexa-cargeners		40-135	40-135	20	20
All hepta- and octa-cargeners		25-135	25-135	20	20
<b>Total petroleum hydrocarbons (TPH-HCID, TPH D)</b>					
Diesel		38-160	36-157	30	30

- (a) Control limits are based on current ARI laboratory data or the EPA method. Control limits may be modified during the RI/FS process as the limits are refined. Instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired control limits and associated QC criteria
  - (b) RPD = relative percent difference.
  - (c) If sample value is within 5 times the quantitation limit (QL), control limits will be  $\pm$  QL for water or  $\pm$  2QL for soil.
  - (d) Refers to laboratory duplicate results.

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TABLE B-4  
SURROGATE RECOVERY CONTROL LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

Analysis (Method)	Surrogate Compound	Recovery Control Limits (%) <sup>(a)</sup>	
		Water	Soil
<b>Volatiles (8260)</b>			
	d8-Toluene	87-115	84-116
	Bromofluorobenzene	86-113	73-118
	d4-1,2-Dichloroethane	77-123	82-131
	d4-1,2-Dichlorobenzene	90-113	85-115
<b>Semivolatiles (8270)</b>			
	d5-Nitrobenzene	30-113	27-109
	2-Fluorobiphenyl	20-129	47-108
	d14-p-Terphenyl	30-134	43-122
	d5-Phenol	10-101	31-102
	2-Fluorophenol	10-111	47-108
	2,4,6-Tribromophenol	10-134	28-117
	d4-2-Chlorophenol	10-129	33-104
	d4-1,2-Dichlorobenzene	35-100	31-103
<b>Chlorinated phenols (modified 8040)</b>			
	Bromodichlorophenol	30-160	30-160
<b>Polychlorinated biphenyls (8081)</b>			
	TCMX	30-103	33-134
	DCBP	30-128	43-155
<b>Total petroleum hydrocarbons (OTPH-HCID AND OTPH-D)</b>			
	Methyl arachidate	32-157	33-160

(a) Control limits are based on current ARI laboratory data or the EPA method. Control limits may be modified during the RI process as the limits are refined. Instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired control limits and associated QC criteria

TABLE B-5

QUANTITATION LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

Analysis	Analyte	Quantitation Limits <sup>(a)</sup>		
		Water (µg/L)	Soil (mg/kg)	
<b>Standard Laboratory Methods:</b>				
<b>Volatiles</b>				
Benzene		1.0	0.001	
Toluene		1.0	0.001	
Ethylbenzene		1.0	0.001	
Xylenes (total)		1.0	0.002	
All others		1.0-10	0.001-0.007	
<b>Semivolatile organics</b>				
2-Chlorophenol		1.0	0.130	
2,4-Dichlorophenol		3.0	0.220	
2,4,6-Trichlorophenol		5.0	0.330	
2,4,5-Trichlorophenol		5.0	0.330	
Pentachlorophenol		1.0	0.330	
Benzo(a)Anthracene		1.0	0.067	
Chrysene		1.0	0.067	
Benzo(b)Fluoranthene		1.0	0.200	
Benzo(k)Fluoranthene		1.0	0.130	
Benzo(a)Pyrene		1.0	0.130	
Indeno(1,2,3-cd)Pyrene		1.0	0.200	
Dibenz(a,h)Anthracene		1.0	0.200	
All others		1.0-10	0.041-0.670	
<b>Chlorinated phenols</b>				
2,4,6-Trichlorophenol		0.25	0.01	
2,3,6-Trichlorophenol		0.25	0.01	
2,4,5-Trichlorophenol		0.25	0.01	
2,3,4-Trichlorophenol		0.25	0.01	
2,3,5,6-Tetrachlorophenol		0.25	0.01	
2,3,4,5-Tetrachlorophenol		0.25	0.01	
Pentachlorophenol		0.25	0.01	
<b>Priority pollutant metals</b>				
Polychlorinated biphenyls		1-2	0.033-0.067	

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TABLE B-5

QUANTITATION LIMITS  
TIME OIL CO. NORTHWEST TERMINAL  
PORTLAND, OREGON

Analvsis	Analvte	Quantitation Limits <sup>(a)</sup>	
		Water (µg/L)	Soil (mg/kg)
<b>Dioxins and furans</b>			
All Tetra-congeners		1e-05 <sup>(b)</sup>	1e-03 <sup>(b)</sup>
All Penta-congeners		5e-05 <sup>(b)</sup>	5e-03 <sup>(b)</sup>
All Hexa-congeners		5e-05 <sup>(b)</sup>	5e-03 <sup>(b)</sup>
All Hepta-congeners		5e-05 <sup>(b)</sup>	5e-03 <sup>(b)</sup>
All Octa-congeners		1e-04 <sup>(b)</sup>	1e-02 <sup>(b)</sup>
Total petroleum hydrocarbons		100-250	10-50
Total organic carbon		--	1
<b>Immunoassay field screening methods</b>			
Pentachlorophenol		5	0.5
Total petroleum hydrocarbons		245	15
Diesel		165	10
Gasoline		--	0.4-2
Polychlorinated biphenyls			

- (a) Quantitation limits are based on current laboratory data and may be modified during the RI process as methodology is refined. Quantitation limits listed for soil are based on wet weight. The quantitation limits calculated by the laboratory for soil, calculated on dry weight basis, will be higher. Laboratory quantitation limits will be based on the lowest standard on the calibration curve. Instances may arise where high sample concentrations, nonhomogeneity of samples, or matrix interferences preclude achieving the desired quantitation limits and associated QC criteria.

(b) Laboratory target detection limit, which is generally achievable but may be influenced by instrument sensitivity, recovery, and matrix interferences.

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TABLE B-6

**RI ANALYTICAL METHODS<sup>(a)</sup>**  
**TIME OIL CO. NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Sample Type	Extraction/Cleanup	Analytical Method
<b>Standard Laboratory Methods:</b>		
Soil		
Chlorinated phenols or pentachlorophenol	3550 (sonication)	8040 (modified)
Volatile organics <sup>(b)</sup>	None	8260
Semivolatile organics <sup>(b)</sup>	3550 (sonication)	8270
Dioxins/furans <sup>(c)</sup>	per 8290 methodology	8290
Total petroleum hydrocarbons	None	OTPH-HCID and/or OTPH-D <sup>(d)</sup>
Polychlorinated biphenyls	3550 (sonication)	8081
Priority pollutant metals <sup>(e)</sup>	3050 (acid digestion)	6010/7000
Total organic carbon	Drying, purging <sup>(f)</sup>	Combustion/infrared <sup>(g)</sup>
Grain size	None	ASTM D 422 <sup>(h)</sup>
Vertical conductivity	None	ASTM D 5084 <sup>(i)</sup>
Percent moisture/solids	None	ASTM D 2216 <sup>(j)</sup>
Groundwater		
Chlorinated phenols or pentachlorophenol	3510 (separatory funnel)	8040 (modified)
Volatile organics <sup>(b)</sup>	None	8260
Semivolatile organics <sup>(b)</sup>	3510 (separatory funnel)	8270
Polychlorinated biphenyls	3510 (sonication)	8081
Priority pollutant metals <sup>(e)</sup>	3020 (acid digestion)	6010/7000
Dioxins/furans <sup>(c)</sup>	per 8290 methodology	8290
Total petroleum hydrocarbons	None	OTPH-HCID and/or OTPH-D <sup>(d)</sup>
Major ions <sup>(k)</sup>	None	Cations by ICP (6010) Anions by standard EPA methods

TABLE B-6

**RI ANALYTICAL METHODS<sup>(a)</sup>**  
**TIME OIL CO. NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Sample Type	Extraction/Cleanup	Analytical Method
<b>Dust</b>		
Pentachlorophenol	3550 (sonication)	8040 (modified)
<b>Immunoassay field screening methods</b>		
<b>Soil and water</b>		
Pentachlorophenol		4010
Total petroleum hydrocarbons		4030 (draft; June 1992)
Polychlorinated biphenyls		4020 (draft; October 1992)

- (a) Methods are from SW-846 (EPA 1986, updated 1995) unless otherwise referenced.
- (b) Laboratory will be required to report first 10 tentatively identified compounds (TICs) to aid in the identification of carrier and additive chemicals.
- (c) Dioxin/furan results will be converted to an equivalent 2,3,7,8-TCDD toxicity by multiplying concentrations by the toxicity equivalence factors (TEFs; Table B-7).
- (d) Source: DEQ 1990b.
- (e) Includes antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, and zinc.
- (f) Source: ASA 1982.
- (g) Includes calcium, magnesium, sodium, potassium, sulfate, nitrate, chloride, carbonate, and bicarbonate.
- (h) Source: ASTM 1994a.
- (i) Source: ASTM 1994b.
- (j) Source: ASTM 1994c.

TABLE B-7

TOXICITY EQUIVALENCE FACTORS<sup>(a)</sup>  
 TIME OIL CO. NORTHWEST TERMINAL  
 PORTLAND, OREGON

Compound	I-TEFs/89
Mono-, Di-, and TriCDDs	0
2,3,7,8-TCDD	1
Other TCDDs	0
2,3,7,8-PeCDD	0.5
Other PeCDDs	0
2,3,7,8-HxCDDs	0.1
Other HxCDDs	0
2,3,7,8-HpCDDs	0.01
Other HpCDDs	0
OCDD	0.001
Mono-, Di-, and TriCDFs	0
2,3,7,8-TCDF	0.1
Other TCDFs	0
1,2,3,7,8-PeCDF	0.05
2,3,4,7,8-PeCDF	0.5
Other PeCDFs	0
2,3,7,8-HxCDFs	0.1
Other HxCDFs	0
2,3,7,8-HpCDFs	0.01
Other HpCDFs	0
OCDF	0.001

(a) Source: EPA 1989b.

APPENDIX C

## Health and Safety Plan

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## 1.0 INTRODUCTION

This health and safety plan presents the protocols that will be required to provide for worker health and safety during the investigative activities to be conducted at Time Oil Co.'s (Time) Northwest Terminal in Portland, Oregon. This plan presents a description of known existing site conditions and the project health and safety organization, and also includes safety rules and procedures; criteria for hazard and risk analysis; description of levels of personal protection and required equipment; air monitoring procedures; emergency response information; training requirements; and requirements for routine health care and health monitoring.

The requirements outlined in this plan are considered the minimum health and safety requirements due to potential site contamination. All fieldwork will be performed in accordance with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.120, which regulates hazardous waste site operations; as well as Oregon requirements outlined in the Oregon Administrative Rules (OAR 437). This plan does not address physical worker safety issues that may be associated with excavation, trenching, and shoring (OAR 437-03, Subdivision P) or work in confined spaces (OAR 437-02, Subdivision E).

### 1.1 SITE BACKGROUND

The Northwest Terminal facility is currently used for petroleum products handling and storage, and is bounded to the north, east, and south by heavy industrial complexes of Portland's Rivergate area and the Port of Portland, and to the west by the Willamette River. Within the facility, which covers approximately 52 acres, are several areas distinguished by their current and/or historical uses (Figure C-1). These include the:

- **Active west tank farm area** where various petroleum products are stored. This bulk product terminal area is located in the western portion of the facility, adjacent to the Willamette River. Gasoline, diesel, ethanol, and other petroleum products are stored in 26 above-ground storage tanks ranging from 5,000 to 80,000 gallons in size. In 1979 there was a documented release of diesel, and in 1994 there was a release of unleaded gasoline within the tank farm area. Because it is an active tank farm, health and safety issues include not only chemical exposure and physical hazards, but explosive hazards as well. The west tank farm area is covered by this health and safety plan.
- **Active south tank farm area (former Bell terminal)** located in the southwestern portion of the facility. Petroleum products are stored in ten aboveground storage tanks and one underground storage tank. No environmental investigations are anticipated in this area; therefore, this area is not covered by this health and safety plan.

- Loading rack where petroleum products are transferred from the west tank farm area to trucks. The loading rack is located just west of the office. A spill of ethanol occurred in this area in 1990, and subsequent remedial actions included spill containment, soil excavation and landfarming, soil vapor extraction, and pumping and treating ethanol-affected groundwater from well M. No environmental investigations of the loading rack are planned; however, investigations relating to other areas of the facility may include intrusive activities in this area and, therefore, this health and safety plan does address this area
- Butane and ethanol storage area and loading rack located to the southeast of the office area. This area includes two aboveground tanks for storage of ethanol (currently empty) and one aboveground tank for butane storage. No intrusive environmental activities are planned in this area; therefore, this area is not covered by this health and safety plan.
- Petroleum transfers and receipt facilities, including above- and below-ground piping; product receipt facilities via rail, truck, and vessel; product distribution facilities via truck, marine vessels (a 380-ft dock in the Willamette River), and rail. No environmental investigations are anticipated in this area; therefore, this area is not covered by this health and safety plan.
- Former pentachlorophenol mixing area where specialty wood treating products containing pentachlorophenol in various formulations were blended and stored for offsite shipment. The former pentachlorophenol (PCP) mixing area is located in the approximate center of the western portion of the facility, and includes the former PCP warehouse; the area south of the warehouse (formerly occupied by various mixing and storage tanks and currently empty); a stockpile of approximately 3000 yd<sup>3</sup> of soil that was excavated from the area south of the warehouse in 1989 and placed on a liner, under a cover, and surrounded by a concrete wall or berm in an area adjacent to the southwest corner of the excavated area; and inactive soil treatment area just south of the stockpile. Releases of PCP, carriers, additives, and the resultant formulations occurred to soil in the former mixing area, and those chemicals are suspected to exist today in the stockpiled soil, as well as in unexcavated soil in the former PCP mixing area. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.
- Former Crosby & Overton tank area, located directly south of the former PCP mixing area, where waste oils were previously stored in two aboveground storage tanks. Those tanks have been removed from this area. Another aboveground tank (38009) located in this area was established in 1989 as a bioreactor during soil treatment activities for the soil stockpile but is currently unused. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.
- Entrance, office, and equipment maintenance area located in the northwestern portion of the facility. There are no environmental investigations planned in this area.
- Inactive and currently undeveloped area located in the eastern portion of the facility.

The purposes of the planned environmental activities are to collect sufficient data to characterize the nature and extent of contamination that remains at the site, to consolidate contaminated material that may exist in the eastern portion of the facility with similar material in other areas, and to verify the removal in those areas where removal takes place. Field investigations covered by this health and safety plan may include:

- Sampling and analyzing soil in and adjacent to areas previously reported to be contaminated with PCP and other carrier compounds, PCBs or TPH, or where previous site activities suggest the potential for contamination
- • Installing monitoring wells and sampling and analyzing groundwater in areas downgradient of previously identified soil or groundwater contamination and/or where previous hydrogeologic characterization is considered insufficient
- Abandoning existing wells which are damaged
- Measuring water levels periodically to evaluate flow directions and piezometric head gradients
- Conducting tests in selected monitoring wells to evaluate aquifer properties and potential contaminant migration pathways.

This health and safety plan does not cover site activities that are limited to walking across any exclusion zone designated in this plan when the activities noted above are not in progress in that exclusion zone, and if the activities in progress in any other exclusion zone do not represent a reasonable risk of exposure.

PCP and petroleum-related chemicals are expected to be the most frequently encountered constituents of concern at the site. Table C-1 lists the potential constituents of concern, with their maximum previously detected concentrations (if known) and health-based exposure information. It should be noted that the symptoms listed as a result of exposure are generally associated with acute (short term) exposures to high concentrations of a constituent. Such symptoms may not be associated with the lower level exposure that would be the most likely exposure scenario encountered during site work. Lack of these symptoms does not indicate that exposure is not occurring. Also, symptoms of exposure are not available for some of the constituents. Therefore, use of prescribed protective equipment and monitoring instruments in accordance with this plan is required in order for exposure to these constituents to be kept as low as possible.

## **1.2 HEALTH AND SAFETY PLAN APPLICABILITY AND ADHERENCE**

All individuals performing fieldwork must read, understand, and comply with this health and safety plan. All field participants must read the plan prior to undertaking field activities. If any information presented in this plan is unclear, the reader should contact the site safety officer for clarification prior to participating in any field activity. Once the information has been read and understood, the individual must sign the Acknowledgment (Table C-2), which will then be placed in the job file.

Similarly, all subcontractors for Landau Associates must prepare their own health and safety plan that is at least as protective as this plan, or they may adopt this plan as their own. Failure to comply with the requirements of this plan are grounds for immediate dismissal. Copies of an acknowledgment form similar to that provided as Table C-2 must be provided to Landau Associates' site health and safety officer prior to the commencement of field activities.

This plan is flexible, and allows unanticipated site-specific problems to be addressed, while providing adequate and suitable worker protection. The plan may be modified at any time, based on the judgment of the respective site safety officer or the project safety officer, as appropriate. Minor changes to the plan regarding day-to-day activities (e.g., location of decontamination station, etc.) may be made by the site safety officer. Substantive changes to procedures (e.g., monitoring frequency, etc.) must also receive the concurrence of both the site safety officer and the project safety officer. Any modifications to the plan will be documented using Table C-3 (Modification to Health and Safety Plan) and will be presented to the onsite team during a safety briefing.

Activities conducted as part of this investigation shall be conducted without creating health and safety risks for nearby workers or the public. All onsite personnel shall be attentive to the potential for release of contaminated materials associated with field activities and shall immediately bring all such matters to the attention of the appropriate site safety officer. Decontamination procedures and other elements of the field procedures (e.g., access to/from work areas by heavy equipment) have been developed to be protective of both worker and public health and safety.

## **1.3 RESPONSIBLE INDIVIDUALS**

Safety during the field investigations will be the responsibility of the Landau Associates' project manager and the designated site safety officer. The site safety officer, or designee, will be present at the site at all times during field activities related to the investigation.

## 2.0 SITE ORGANIZATION AND OPERATION

The areas of the site to be investigated and the type of activities involved in the investigation are diverse. Additionally, the distribution of contamination at the site is nonuniform in nature. These factors preclude the use of a single work zone boundary.

The designated level of protection for each work area onsite may be downgraded (C to D) if monitoring data obtained prior to or during work activities indicate that such a downgrade is appropriate. Conversely, the level of protection must be upgraded if monitoring conducted during work activities so indicates (see Section 6 for site monitoring and action levels). Figure C-1 should be regarded only as an indication of the general work area, actual boundaries may vary slightly with work activity requirements and will be flagged once defined.

### 2.1 WORK ZONES

Each work area will consist of an exclusion zone, a contamination reduction zone, and a support zone:

- **Exclusion Zone:** The outer perimeter of each work area defines the outer perimeter of the exclusion zone for that work area. Only authorized field personnel will be allowed in each exclusion zone. The initial level of protection required in the exclusion zone may be adjusted as conditions change. Levels of protection are discussed in more detail in Section 5.
- **Contamination Reduction Zone:** All personnel and equipment will leave the exclusion zone through a contamination reduction zone. Both personnel and equipment decontamination will occur in this zone to prevent the transfer of contaminants to the support zone (decontamination procedures are specified in Section 3.2.3). The transition from the exclusion zone to the contamination reduction zone is shown schematically on Figure C-2.
- **Support Zone:** Located adjacent to the contamination reduction zone, the support zone is where all personnel will suit up in specified personal protective equipment before entering the work area defined by the exclusion zone. The support zone includes clean equipment storage and personnel resting and eating facilities.

Each zone in each work area will be established on an activity-by-activity basis prior to initiation of work and will be clearly delineated (marked by tape or fencing).

## **2.2 SITE SECURITY**

Most of the area in which field activities will occur is a restricted-access industrial area. For work activities that are conducted in areas with public access, the work area will be blocked off and posted.

## **3.0 SAFETY RULES AND PROCEDURES**

Safety is the responsibility of every individual involved in project efforts. Whether in the office or in the field, properly followed procedures are essential for personal safety and to minimize injuries or accidents involving equipment. Potential hazards while working at the site include, but are not limited:

- Exposure to toxic and/or hazardous chemicals
- Physical hazards from use of drilling, sampling, and testing equipment
- Physical hazards from heavy equipment
- Physical hazards from working conditions (e.g., heat stress, hypothermia).

### **3.1 SAFETY RULES**

All personnel working in the field will follow the rules and procedures listed below:

- All personnel will conduct themselves in a professional manner at all times.
- No personnel will be admitted into an operational exclusion zone without safety equipment in proper working condition and requisite training.
- All personnel must comply with the established safety procedures. Anyone working onsite for or under contract with Landau Associates who does not comply with this health and safety plan may be immediately dismissed from the site.
- Working while under the influence of intoxicants, narcotics, or controlled substances is prohibited. Prescription drugs should not be taken by personnel if the potential for contact with toxic substances exists, unless approved in writing by a physician.
- Firearms, ammunition, fireworks, and explosives are prohibited.
- Climbing or standing on machinery (other than drill rigs or service trucks) or equipment is prohibited unless authorized by the site safety officer.

- Long hair must be contained inside a hard hat. Facial hair that interferes with proper operation and fit of respiratory protection gear is not allowed.
- A team system will be used within an exclusion zone. During site operations, each worker is a safety backup for his/her team partners and should make all personnel aware of dangerous situations that may develop.
- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in an exclusion zone.
- Smoking or consumption of food and beverages is allowed only within designated areas in the support zones.
- Disposable clothing will be used whenever necessary and appropriate to minimize the risk of cross contamination.
- The number of personnel and the amount of equipment in contaminated areas will be minimized to allow for efficient site operations.
- Samples will be collected only by trained and authorized personnel.
- Contact with contaminated or potentially contaminated material should be avoided. Efforts will be made to stage site activity upwind of investigative equipment, activities, and materials.
- Proper decontamination procedures must be followed before leaving an exclusion zone and the site, unless medical emergencies dictate otherwise (Section 3.2.3). All decontamination residual materials, and any other potentially contaminated materials, will be handled properly and kept onsite or at a designated secure stockpile area.
- Only approved work clothes or equipment will be allowed within the exclusion zones.
- Exchange of personal protective equipment will not be allowed.

## 3.2 SAFETY PROCEDURES

### 3.2.1 LEAVING THE SUPPORT ZONE TO ENTER SITE

- Prior to beginning investigation activities, review site information updates. These updates will be provided by the site safety officer and will provide important information concerning:
  - Expected hazards
  - Special conditions
  - Sampling procedures

- Location of phones
- Emergency medical information
- Level of personal protection required
- Finish eating and extinguish smoking materials prior to suiting up.
- Attend safety briefing and worker question and answer period, if applicable.
- Check safety gear and equipment. Suit up as required to begin activities.
- Measure and delineate exclusion zone (unless established previously).

### **3.2.2 ACTIVITIES IN EXCLUSION ZONE**

- All activities will be conducted at a minimum of Level D (modified) (see Section 5).
- For activities capable of creating volatile airborne contamination, levels of personal protection will be adjusted according to results of work zone air monitoring (Section 6).
- Whenever possible, personnel will be stationed upwind of field activities capable of creating airborne contamination.
- If any physical discomfort is experienced (e.g., abnormalities, nausea, lightheadedness), immediately stop work, tell the other team members, and leave the area.
- If any personal protective equipment fails, immediately leave the area.
- One person must never be left alone in an exclusion zone.
- Use maximum care in handling samples. If the sampling site is not accessible using gear available (i.e., water too high, slippery or steeply sloped surface, holes, etc.), confer with the Landau Associates' project manager and/or site safety officer, as appropriate, to arrange an alternate sampling site or appropriate equipment/procedures to obtain samples safely.
- Immediately wipe off spills and dirt from sampling containers.

### **3.2.3 SITE EXIT DECONTAMINATION**

All personnel and equipment must be properly decontaminated before entering a support zone from an exclusion zone. All contaminated equipment and materials will leave only through the contamination reduction zone or will be contained onsite; any potentially contaminated materials to be stockpiled will be kept in designated, secure locations.

### 3.2.3.1 Routine Decontamination Procedures

A decontamination area will be set up in the contamination reduction zone at the border of each exclusion zone. Prior to leaving the exclusion zone:

- Portable sampling equipment will be washed or placed in/on plastic for vehicle transport to equipment decontamination area
- Drilling rig auger flights will be placed on a trailer for transport to the decontamination area
- Drill cuttings will be brushed and/or washed off the drill rig before moving to the decontamination area, to minimize transport of potentially contaminated materials from the exclusion zone.

In the contaminant reduction zone, sampling, drilling, and other equipment will be decontaminated as follows:

- Sampling equipment will be decontaminated as outlined in the work plan.
- All heavy equipment must be thoroughly decontaminated prior to leaving the site, with particular care taken in decontaminating those parts of the heavy equipment that have come in direct contact with contaminants, such as tracks, tires, shovels, grapples, and scoops. High-pressure hot water cleaning will be used for these, aided by physical scrubbing with disposable brushes when necessary to loosen caked materials. All portions of the equipment, including the undercarriage, chassis, and cab, will also be inspected and cleaned as necessary.
- Any vehicle used for transportation in an exclusion zone will be equipped with seat covers that can be easily wiped down. All such vehicles must be decontaminated prior to leaving the exclusion zone. Decontamination will include at a minimum high pressure washing of the exterior and, as necessary, wet wiping the interior and scrubbing of the exterior.
- Personal protective equipment will be removed and washed and/or containerized prior to leaving the contaminant reduction zone.

Certain parts of contaminated respirators, such as the harness assembly or cloth components, are difficult to decontaminate. If grossly contaminated, they will be discarded. Rubber components will be soaked in soap and water and scrubbed with a brush. Respirators will be sanitized by rinsing in a detergent solution followed by a clear rinse, then hung to dry.

### **3.2.3.2 Emergency Decontamination**

In case of an emergency, gross contamination procedures will be speedily implemented if possible. If a life-threatening injury occurs and the injured person cannot undergo decontamination procedures without incurring additional injuries or risk, he or she will be transported wrapped in plastic sheeting if time allows and if consistent with the injury. The medical facility will be: 1) informed that the injured person has not been decontaminated, and 2) given information regarding the most probable contaminants.

### **3.2.4 DISPOSAL OF CONTAMINATED FLUIDS AND MATERIALS**

All equipment and materials used for decontamination or personal protection will be cleaned or collected for appropriate disposal. All nondisposable equipment will be decontaminated onsite. Disposables will be containerized. Contaminated liquids will be collected in storage tanks or containers and stockpiled in a secure location. Storage and/or disposal will be conducted in accordance with the work plan.

### **3.2.5 HOUSEKEEPING**

Work areas will be kept as clean and orderly as possible at all times. Ordinary refuse will be placed in suitable rubbish bins or trash containers at the site. The storage or introduction of extraneous materials will be minimized in the exclusion zone to minimize the decontamination load and reduce possibilities for cross contamination.

### **3.2.6 VISITORS**

Authorized visitors will only be allowed to observe operations from the support zone or beyond, and must obey all instructions of the site safety officer and/or Time Oil's representative. Representatives from the Oregon Department of Environmental Quality (DEQ), the Oregon Occupational Safety and Health Division, and U.S. Environmental Protection Agency (EPA) must also possess appropriate health and safety equipment at the time of the visit, and have a health and safety plan at least as stringent as this plan, or adopt this plan as their own.

## 4.0 ANALYSIS OF SITE HAZARDS AND RISKS

### 4.1 BASIS FOR ANALYSIS

Results of previous investigations of specific areas within the Northwest Terminal have identified the presence of contaminants of concern. Maximum concentrations of constituents detected in area soil and groundwater are summarized in Table C-1 along with occupational exposure criteria, as available, and potential exposure pathways of concern.

The planned activities will involve physical hazards inherent with working outside and in the presence of heavy equipment. In addition, activities conducted within the vicinity of active bulk storage involve explosive hazards.

### 4.2 SUSPECTED HAZARDOUS SUBSTANCES

There is a potential for field personnel to become exposed to contaminants in the defined work areas. Dermal, inhalation, and incidental ingestion exposures are possible. The general risk of exposure on the site is low to moderate.

Current soil and groundwater contamination could lead to dermal contact during intrusive activities, such as excavation, drilling, and soil or groundwater sampling. Dermal protection, as defined in Section 5.2, will, therefore, be required for all such activities. Volatization of a few identified contaminants could pose risk of inhalation exposures. Action levels and the associated respiratory protection for potential inhalation exposures will be based initially on constituent concentrations presented in Table C-1 and will be adjusted thereafter based on ambient monitoring data to be collected during field activities (Section 6).

## 5.0 PERSONAL SAFETY EQUIPMENT

### 5.1 LEVELS OF PROTECTION

Levels of protection have been defined by the EPA in the *EPA Standard Operating Guide, 1984:*

- Level A requires a fully encapsulating suit and full face piece pressure demand self-contained breathing apparatus (SCBA) with a 5-minute, supplied air escape pack for the

highest level of respiratory, skin, and eye protection. Level A is not anticipated at this site and, therefore, is not discussed further.

- Level B requires maximum respiratory protection by the use of supplied air or a positive pressure SCBA. A 5-minute, supplied air escape pack is required while in Level B. Dermal protection is selected on the basis of anticipated hazards. Level B is not anticipated at this site, and therefore, is not discussed further.
- Level C requires an air purifying respirator that is specific to the contaminants of concern. The degree of dermal protection depends on anticipated hazards.
- Level D is the basic work uniform, modified for work at this site, and as described in Section 5.2.

There are numerous variations and modifications possible with each level of protection. Personal protection action levels for site project activities are discussed in Section 6.

## 5.2 REQUIRED EQUIPMENT

The level of protection designated for site work indicates the level of protection that should be initially used. Air monitoring results may indicate that a downgrading (or upgrading) in the level of protection is appropriate. Level C protection is initially recommended for intrusive work (drilling, digging, or otherwise disturbing soil, accessing monitoring wells for water level measurements or sampling, etc.) only. Level D (modified) is considered appropriate for nonintrusive activities unless air monitoring indicates that an upgrade is necessary. The following sections define Level D (modified) and Level C protective equipment. As noted previously, these levels of protection do not cover site activities that are limited to walking across any exclusion zone designated in this plan when the RI activities are not in progress in that exclusion zone, and if the activities in progress in any other exclusion zone do not represent a reasonable risk of exposure.

### 5.2.1 LEVEL D (MODIFIED)

- One-piece disposable Tyvek coveralls, which are resistant to PCP, shall be used. Coveralls will be taped at wrists and ankles if wet or excessively dusty conditions are expected.
- PVC inner-disposable gloves.
- Neoprene and/or nitrile outer gloves.
- Neoprene steel-toed and steel-shank, chemically resistant, impermeable outer boots.

- Hard hat (with splash shield if liquid splashes or sprays are likely to be encountered; not required when groundwater monitoring is the only activity occurring at the site).
- Safety glasses with side shields (for intrusive work and groundwater sampling only).

Level D may only be worn in work areas initially designated as Level C after the site safety officer has made a determination that exposure to hazardous materials is unlikely and that exposures will not approach the threshold limit value/permissible exposure level (TLV/PEL).

#### 5.2.2 LEVEL C

- All Level D (modified) equipment described above (including all equipment identified for intrusive work)
- Half-face air purifying respirator equipped with organic vapor/HEPA cartridges. If contaminated liquid splashes or sprays are likely to be encountered, full-face air purifying respirators equipped with organic vapor/HEPA cartridges shall be used.

## 6.0 SITE MONITORING AND ACTION LEVELS

Air monitoring and visual observations of the site are required to determine the effectiveness of the engineering controls, to re-evaluate levels of protection, and determine if site conditions have changed. At a minimum, monitoring will be done at the beginning of the work shift and periodically as described below. Air monitoring will be conducted during all activities within the activity zone, including cleaning, excavation, and decontamination of equipment.

Each piece of monitoring equipment will be inspected prior to work start-up. Failure of any of the equipment listed below must be reported to the site health and safety officer immediately. Work in the exclusion zone is not to continue beyond the monitoring cycle if equipment is not working properly.

Prior to initially entering the work area, monitoring will be conducted at the boundary of the work area (approximately 35 ft upwind) and proceed inward to establish the level of protection needed for the planned activities. This initial monitoring will be conducted in Level C, with full-face respirator. Thereafter, air monitoring at the top of the borehole for explosive conditions and in the breathing zone for volatile constituents will be conducted as described below to verify the

appropriate level of respiratory protection (action levels are provided in Table C-4). The personal protective equipment requirements established through the monitoring program will apply to the area within a 30-ft radius of where the contaminants are measured.

When conducting intrusive activities within the active tank farm area, a dosimeter badge will be worn in the breathing zone over one typical 8-hour work shift by the employee with the most representative benzene exposure. The badge will be submitted to the laboratory for analysis with the soil samples (care should be taken to package the dosimeter so that there is no cross-media transfer from the soil samples).

**Explosive Conditions.** In the active tank farm area, prior to initiating work activities and during intrusive activities, the potential for explosive conditions will be monitored using a combustible gas indicator (CGI) and an oxygen meter. Calibrate the CGI prior to each day's activities according to manufacturer's instructions. Monitor initially during all drilling and excavation work and record levels in the health and safety log book at least every  $\frac{1}{2}$  hour. Set the alarm to auditory. If odor, taste, or discomfort is detected by the crew, monitor continuously, or if any of the action levels noted in Table C-4 are exceeded, monitoring is to be done continuously. If explosive conditions are identified at any time, work activities will cease and the area will be evacuated. Re-entry will only be allowed following progressive monitoring inward from the boundary of the work area that indicates that explosive conditions have been mitigated. Mitigation measures may include use of fans to dissipate vapors.

## 6.1 VOLATILE ORGANIC COMPOUNDS

Substances that are most hazardous from a chronic inhalation standpoint are those that are relatively volatile, highly toxic (i.e., low TLV or PEL) and have an odor threshold much higher than the TLV. If a substance has an odor threshold higher than the TLV, it is considered to have poor warning properties because its odor would not be detected until after the acceptable airborne concentration (TLV or PEL) has been exceeded. The designated site safety officer will have a photoionization detector (e.g., TIP meter) onsite at all times that intrusive activities are conducted and will establish background readings well upwind of any excavation, spoils pile, or borehole. TIP readings will be taken frequently during intrusive work. A table showing the relative response to different chemical constituents at different lamp energies will be kept with each TIP for field reference.

### **6.1.1 OUTSIDE ACTIVE TANK FARM AREAS**

The organic vapor action level for field activities outside the active tank farm area is 10 ppm, based on toluene. Benzene has the lowest PEL (1 ppm) for any of the volatile contaminants previously found at the site (Table C-1). The PEL for toluene is 50 ppm, and the action level is set below the PEL to account for other constituents which may be present. While monitoring with the TIP, any consistent readings in the breathing zone that are greater than 5 ppm above the upwind background level for more than 5 minutes, or any readings in the breathing zone greater than 10 ppm other than a momentary peak shall be the action level for donning half-face air purifying respirators equipped with organic vapor/particulate cartridges. Cartridges will be replaced either immediately upon any indication of break through or after each day of use.

Any readings consistently greater than 10 ppm above background or greater than 50 ppm other than for a brief peak, or any peak reading greater than 100 ppm in the breathing zone, will be the action level for exiting the area.

### **6.1.2 WITHIN ACTIVE TANK FARM AREAS**

Benzene has the lowest PEL (1 ppm) for any of the volatile contaminants expected at the site. The action level for allowing downgrading of the level of respiratory protection will be based on benzene. Action levels are provided in Table C-4.

Note that any readings consistently greater than 50 ppm other than for a brief peak, or any peak reading greater than 250 ppm in the breathing zone, will be the action level for exiting the area.

### **6.1.3 IN ALL AREAS**

Zero the PID prior to each day's activity according to manufacturer's instruction. Record any calibration with the span gas in the health and safety log book. Utilize the manufacturer's recommendation for calibration. Recalibrate often, as the instrument is sensitive to dust. Readings should be entered into the log book at 30-minute intervals.

## 7.0 EMERGENCY RESPONSE

### 7.1 REPORTING/NOTIFICATION PROCEDURES

In the case of any emergency, the site safety officer is to be notified immediately. If the situation is life threatening and notification of the site safety officer would delay emergency response, field personnel may initiate the appropriate emergency contacts prior to notifying the site safety officer. The site safety officer will then initiate contacts as follows:

1. Call appropriate emergency services numbers (ambulance, fire, etc.) if not already done and provide the following information:
  - Name and location of person reporting
  - Location of accident/incident
  - Name and affiliation of injured party
  - Description of injuries
  - Status of medical aid effort
  - Details of any chemicals involved
  - Summary of the accident, including the suspected cause and the time it occurred
  - Temporary control measures taken to minimize further risk.

Note: This information is not to be released under any circumstances to parties other than the site safety officer, project safety officer, Landau Associates project manager, Time Oil, and bona fide emergency response team members.

2. Call the Landau Associates' project manager (Table C-5) and provide information noted in Item 1 above.
3. The site safety officer will complete a written accident/incident report using Table C-6, within 24 hours, sending copies to each of the project managers.

Resources to be used in cases of emergency include:

- List of Emergency Contacts: Table C-5 includes both the appropriate emergency services (top of table) and the appropriate project contacts (bottom of table).
- Nearest Phone: As of the date of this plan, telephones are located at the Time site office.

- Onsite Emergency Equipment: An industrial first aid kit, a 20-pound type ABC portable fire extinguisher, and an eyewash kit will accompany each field vehicle.
- Offsite Emergency Services: Phone numbers for offsite emergency services are listed in Table C-5. Copies of this table must be located in each vehicle.

After the required emergency contacts are made, Time and Landau Associates' project managers should be promptly notified by the site safety officer.

- Hospital Route: Good Samaritan Hospital is located near the site and should be utilized where care beyond standard first aid is required. Figure C-3 shows the route to the hospital. Onsite field personnel should become familiar with this route prior to field activities. Driving time from the site to Good Samaritan Hospital is estimated to be about 15 to 20 minutes, depending on traffic conditions.

## 7.2 NON-LIFE THREATENING EMERGENCIES

### 7.2.1 INJURIES

In emergency situations which are not life threatening (e.g., a broken leg), normal decontamination procedures should be followed when possible. However, decontamination procedures may be modified according to the specific circumstances. Outer protective clothing should be removed if doing so would not cause delays or aggravate the injury. Respirators should only be removed: 1) if the victim has stopped breathing, or 2) after the victim has been removed from a breathing hazard area.

Bodily injuries which occur as a result of an accident during operations at the site will be handled in the following manner:

- The victim will be administered to by an individual who holds current first-aid and/or CPR certification, as necessary
- The local first-aid squad/rescue unit and the local hospital (Good Samaritan Hospital, Portland) will be notified as appropriate, depending on the nature of the emergency.

### 7.2.2 HEAT-RELATED ILLNESSES

It is anticipated that site activities will take place during winter months, when temperatures average 40-45°F. However, heat-related illnesses can occur at any time when protective clothing is worn. Workers wearing semipermeable or impermeable encapsulating clothing should be monitored for heat stress through regular checks of heart rate and by more comprehensive monitoring when the temperature in the work area is above 55-60°F. A pulse rate in excess of 150

beats per minute may indicate heat exhaustion, although this rate will vary among workers. All personnel shall know what their baseline pulse rate is before working in elevated temperatures, so as to monitor themselves. The site safety officer will be trained in monitoring, treating, and recognizing the signs of heat stress. If heat stress occurs, decontamination should be minimized and treatment begun immediately, unless the victim is obviously contaminated.

#### 7.2.3 COLD STRESS

Fieldwork will likely be conducted during the winter months, when site personnel may be subject to low temperatures, rain, and winds. In these conditions, field teams must be prepared to wear proper protective clothing and to recognize symptoms of cold stress.

Cold stress can be manifested as both hypothermia and frostbite:

- Hypothermia is a cold-induced decrease in the core body temperature that can increase the safety hazards associated with investigation activities that require maximum attentiveness and manual dexterity. Hypothermia produces shivering, numbness, drowsiness, muscular weakness, and, if severe enough, death.
- Frostbite results from the constriction of blood vessels in the extremities, decreasing the supply of warming blood to these areas. This drop in blood supply may result in the formation of ice crystals in the tissues, causing tissue damage. The symptoms of frostbite are white or grayish skin, blisters, or numbness.

Site personnel should review the information provided in their first aid training for response to cold stress problems.

#### 7.2.4 FLU-LIKE SYMPTOMS

Any site personnel experiencing flu-like symptoms should notify the site safety officer. Such symptoms may be sufficient cause for ceasing operations until the work area is evaluated and a "return to operations" order given by the site safety officer.

### 7.3 FIRE

Fire extinguishers (ABC-type) will be kept in each vehicle and drilling rig. This equipment will be used only to respond to small fires. In the event of major fires, explosions, or fire/explosion hazard conditions, all personnel will immediately evacuate the area. The site safety officer will evaluate the need for further evacuation and/or emergency services.

## **7.4 SITE EVALUATION AND EVACUATION**

The site safety officer will be responsible for determining if circumstances exist which require further evaluation and/or evacuation. The site safety officer should always assume worst-case conditions until proven otherwise. Specific evacuation procedures and warning signs and signals will be covered in the health and safety training session prior to beginning work.

Two levels of evacuation may be considered:

- Withdrawal from the immediate work area onsite
- Evacuation of the surrounding area.

### **7.4.1 WITHDRAW FROM WORK AREA**

Withdrawal to a safe upwind location will be required under the following circumstances:

- Detection of volatile organics and/or toxic gases at concentrations above action levels for the level of protection being worn (Section 6)
- Occurrence of a minor accident—field operations will resume after first aid and decontamination procedures have been administered
- Malfunction or failure of protective equipment, clothing, or respirator.

The following hand signals will be used by site personnel to communication within the work zone if respiratory protection is being used:

- Thumbs up - Okay
- Thumbs down - Not okay
- Hands on wrist - Exit exclusion zone
- Hands on throat - cannot breath.

### **7.4.2 EVACUATION OF SURROUNDING AREA**

There are no foreseeable conditions, based on current knowledge of the site, that would require evacuation of the surrounding area. The site coordinators, in consultation with the site safety officer and, as appropriate, the Landau Associates' project manager, will be responsible for determining if circumstances exist for area-wide evacuation, and should always assume reasonable worst-case conditions until proven otherwise. Fire and police departments must be contacted in

such cases. If evacuation is necessary, it will be implemented with the assistance of the appropriate emergency response personnel (Table C-5).

Procedures for reporting accidents/incidents are provided in Section 7.1. They will be performed in the order indicated.

## 8.0 TRAINING

All personnel performing onsite investigation tasks shall have completed formal health and safety training, which complies with 29 CFR 1910.120 and Oregon Administrative Rule (OAR) Chapter 437 (certificates of successful completion of training will be maintained in job files), and shall verify on-the-job training for those tasks they are assigned to perform. At least one member of each field team will be trained in CPR and first aid. All operations will be reviewed and all unfamiliar operations will be rehearsed prior to performing the actual procedures.

## 9.0 ROUTINE HEALTH CARE AND MONITORING

All persons working in an exclusion zone must have a medical evaluation to determine their baseline medical status prior to any site work. Follow-up examinations are appropriate if exposures are known or suspected to have occurred. Documentation of medical evaluations for all site works will be maintained by the site safety officer.

## 10.0 REFERENCES

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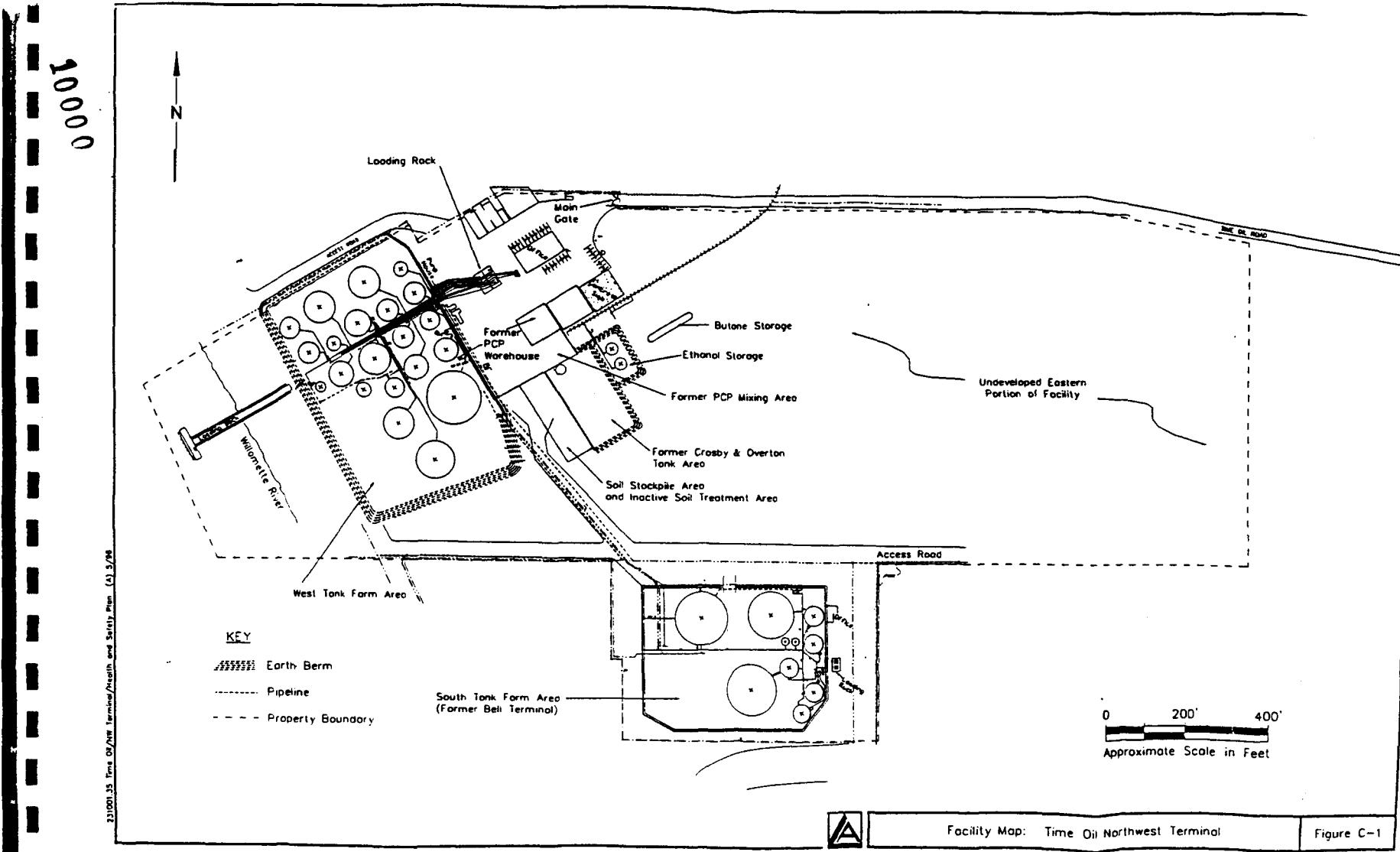
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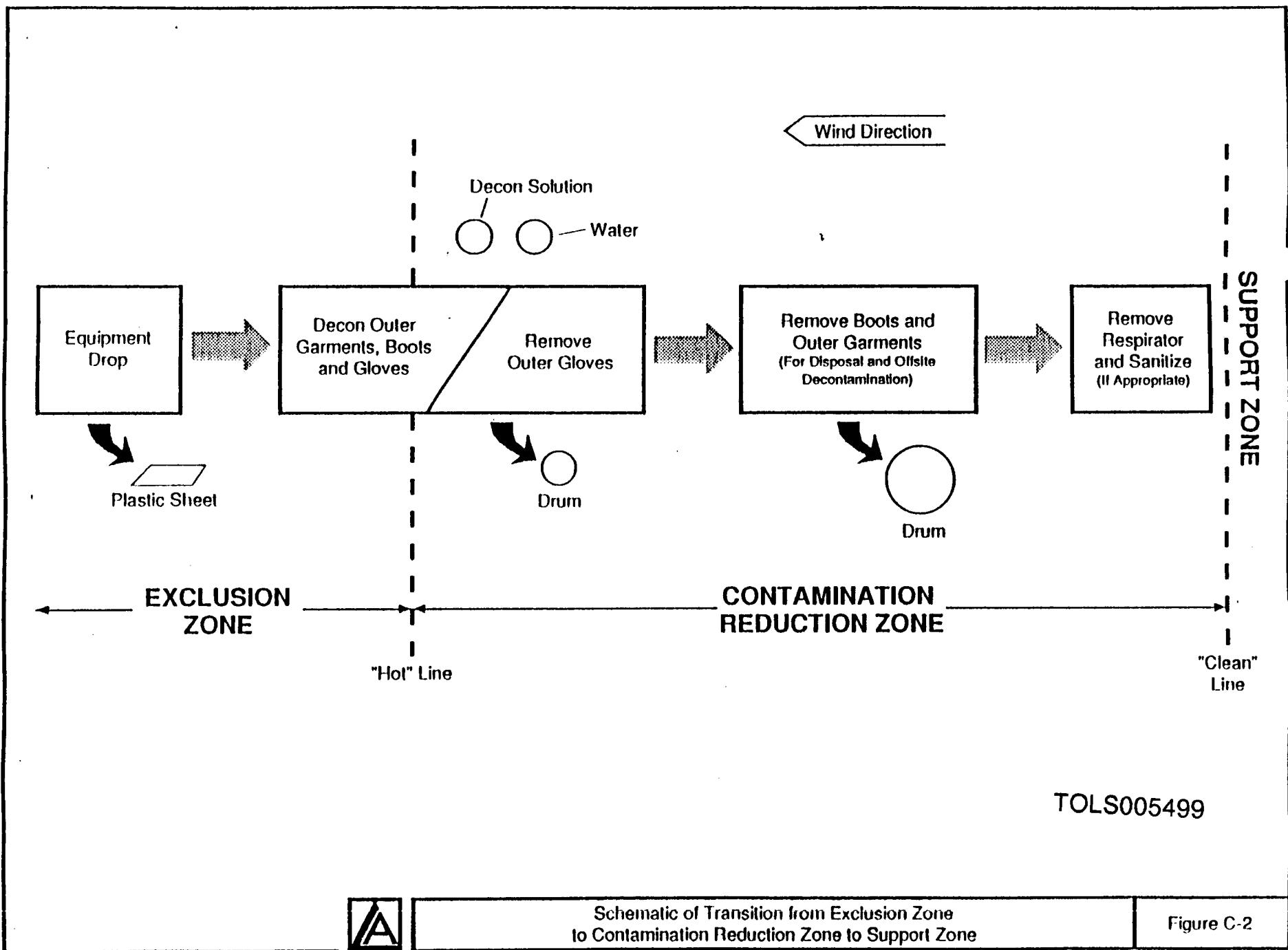
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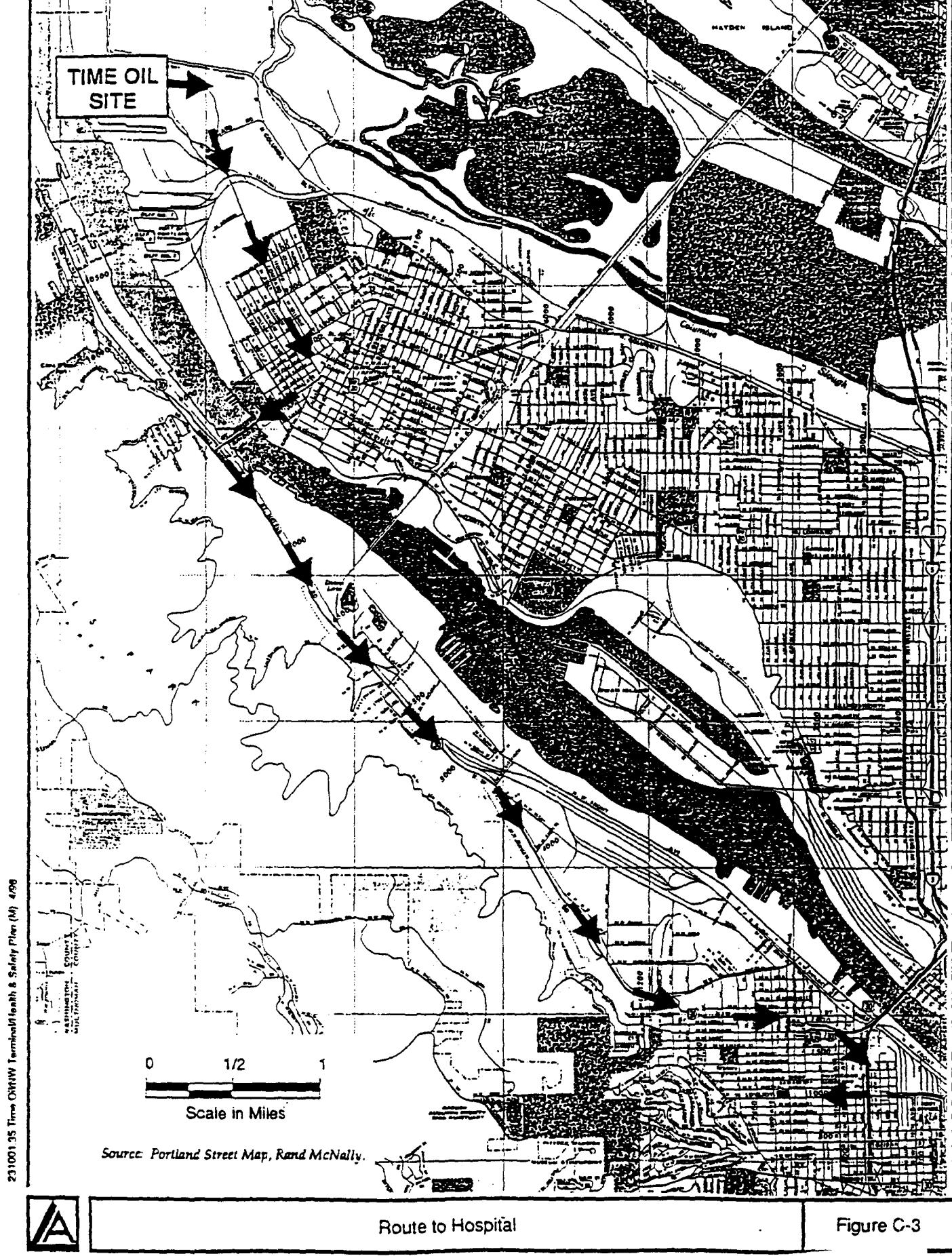


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TABLE C-1

**SITE EXPOSURE ASSESSMENT  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON**

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite		TLV <sup>(a)</sup>	PEL <sup>(b)</sup>	IDLH <sup>(c)</sup>	Exposure Routes <sup>(d)</sup>	Symptoms of Exposure
	Soil (mg/kg)	Groundwater (mg/L)					
Pentachlorophenol	116,000	60	0.5 mg/m <sup>3</sup> (skin)	0.5 mg/m <sup>3</sup> (skin)	2.5 mg/m <sup>3</sup>	Inh, Ing, Abs, Con	Eye, nose, throat irritation, sneezing, weakness, nausea
2,3,4,6-Tetrachlorophenol	71	0.17	DNA <sup>(e)</sup>	DNA	DNA	Inh, Ing, Con, Abs	DNA
2-Chlorophenol	5.3	NA <sup>(f)</sup>	DNA	DNA	DNA	DNA	DNA
Benzene	1	0.64	0.1 ppm	1 ppm	500 ppm	Inh, Abs, Ing, Con	Irritated eyes, nose, respiratory tract, skin
Toluene	12	1.6	50 ppm	200 ppm	500 ppm	Inh, Abs, Ing, Con	Fatigue, dizziness, headache, irritated eyes and nose
Ethylbenzene	NA	1.2	100 ppm	100 ppm	800 ppm	Inh, Ing, Con	Irritated eyes, headache
Xylene	11	3.0	100 ppm	100 ppm	900 ppm	Inh, Abs, Ing, Con	Dizziness, drowsiness, nausea, irritated eyes and skin
Fluorene	2,300	NA	DNA	DNA	DNA	Inh, Ing, Abs, Con	DNA
Phenanthrene	4,600	NA	0.2 ppm <sup>(g)</sup>	0.2 ppm <sup>(g)</sup>	DNA	Inh, Ing, Abs, Con	Skin photosensitization
Anthracene	9,100	NA	0.2 ppm <sup>(g)</sup>	0.2 ppm <sup>(g)</sup>	DNA	Inh, Ing, Abs, Con	DNA
Dioxins and Furans	0.003	NA	DNA	DNA	DNA	DNA	DNA
Benzo(a)anthracene	160	NA	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Chrysene	630	NA	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Benzo(b)fluoranthene	14	NA	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Benzo(a)pyrene	90	NA	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	0.2 mg/m <sup>3</sup> <sup>(h)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Kerosene	NA	NA	DNA	DNA	DNA	Inh, Ing, Abs, Con	DNA
Mineral Spirits	NA	NA	500 ppm <sup>(g)</sup>	DNA	1,100 ppm	Inh, Ing, Con	Irritated eyes, respiratory system
Ethyl alcohol	NA	NA	1,000 ppm	1,000 ppm	3,300 ppm	Inh, Ing, Con	Eye, nose, skin irritation, drowsiness, fatigue, headache
TPH	16,430	NA	DNA	DNA	DNA	Inh, Abs, Ing, Con	See benzene, toluene, ethylbenzene, and xylene
PCB	68	NA	0.5 mg/m <sup>3</sup> (skin)	0.5 mg/m <sup>3</sup>	5.0 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Eye, nose, throat, skin irritation, chloracne

(a) TLV = Threshold limit value, as defined by the American Council of Governmental Industrial Hygienists (1994).

(b) PEL = Permissible exposure limit, as defined by the Occupational Safety and Health Administration (1995).

(c) IDLH = immediately dangerous to life and health (NIOSH).

(d) Exposure route codes: Inh = inhalation; Ing = ingestion; Con = skin and/or eye contact; Abs = skin absorption.

(e) DNA = Data not available.

(f) NA = Not analyzed.

(g) TLV/PEL for total coal tar pitch volatiles (benzene soluble fraction) includes anthracene, benzo(a)pyrene, phenanthrene, acridine, chrysene, and pyrene.

(h) TLV for mineral spirits is for petroleum distillates.

TOLS005501

TABLE C-2  
ACKNOWLEDGEMENT

I have read the attached Health and Safety Plan for the work at Time Oil Co.'s Northwest Terminal, Portland, Oregon. I have discussed any questions which I have regarding these materials with my supervisor, and I understand the requirements of the health and safety plan.

Employee _____	Date _____
Site Safety Officer _____	Date _____

TABLE C-3  
MODIFICATION TO HEALTH AND SAFETY PLAN  
TIME OIL CO., NORTHWEST TERMINAL

DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

Modification: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reasons for Modification: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Site Personnel Briefed:

Name: _____	Date: _____

Approvals:

Site Safety Officer: _____
Manager: _____
Others: _____

TABLE C-4

**ACTION LEVELS FOR PERSONAL PROTECTION  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON**

Monitoring Parameter	Reading <sup>(a)</sup>	Level of Protection
<b>Within Active Tank Farm Area</b>		
Organic Vapors (during all intrusive activities)	PID reading >1 ppm in breathing zone for more than 15 minutes or >5 ppm for momentary peak	Use detector tube
	Detector tube reading for benzene is 0-1 ppm	Modified Level C
	PID or detector tube reading for benzene 1-10 ppm (or >50 ppm short term)	Level C with half-face respirator with organic vapor cartridge
	~ PID or detector tube reading for benzene is 10-50 ppm (or >250 ppm short term)	Level C with full-face respirator with organic vapor cartridge
	PID or detector tube reading >50 ppm or >250 ppm short term	Cease operations and evacuate area
Combustible Gas Indicator (Gas Tech GX8 2 or equivalent)	Explosive Atmosphere (measured at the source or near the excavation).	
	<10% LEL	Continue activity, monitor for toxics
	>10% LEL	Evacuate all personnel from near excavation
Oxygen Meter	Oxygen (measured in breathing zone)	
	<19.5%	Evacuate area
	19.5-23.5%	Continue monitoring
	>23.5%	Remove and shut off ignition sources
<b>All Other Areas of Facility</b>		
Organic Vapors <sup>(b)</sup>	0-5 ppm over background <sup>(c)</sup> (5 minutes)	Level D (modified)
	5-10 ppm over background	Level C - half-face air purifying respirator equipped with organic vapor and HEPA cartridges; full-face respirators with organic vapor and HEPA cartridges are required if contaminated liquid splashes or sprays are likely to be encountered
	>50 ppm over background	Leave the work area
	>100 ppm over background (instantaneous)	Leave the work area

(a) Readings are sustained readings over at least a 1-minute-duration unless otherwise noted.

(b) Determine using a photoionization or other appropriate organic vapor detector.

(c) Background readings obtained 50 ft upwind of site activity.

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TABLE C-5

**EMERGENCY SERVICES  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON**

Service	Name/Location	Phone Number
Ambulance	—/—	911
Fire	—/—	911
Police	—/—	911
Hospital	Good Samaritan Hospital 1015 N.W. 22nd Avenue Portland, Oregon (driving time estimated at 15 to 20 minutes, traffic permitting)	229-7260

## CONTACT INFORMATION

## Time Oil

Kevin Murphy Senior Environmental Specialist	206/286-6443 (office) 206/680-5612 (pager)	Seattle, WA
---	---	-------------

## Landau Associates

Leslee Conner Project Manager	206/778-0907 (office) 206/781-8118 (home)	Edmonds, WA
Rebekah Brooks Health and Safety	206/778-0907 (office)	Edmonds, WA

TABLE C-6  
EMPLOYEE EXPOSURE/INJURY INCIDENT REPORT  
(Use additional page if necessary)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name: \_\_\_\_\_ Employer: \_\_\_\_\_

Site Name and Location: \_\_\_\_\_

Site Weather (clear, rain, snow, etc.): \_\_\_\_\_

Nature of Illness/Injury: \_\_\_\_\_  
\_\_\_\_\_

Symptoms: \_\_\_\_\_

Action Taken: Rest: \_\_\_\_\_ First Aid \_\_\_\_\_ Medical \_\_\_\_\_

Transported by: \_\_\_\_\_

Witnessed by: \_\_\_\_\_

Hospital's Name: \_\_\_\_\_

Treatment: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

What was the person doing at the time of the accident/incident? \_\_\_\_\_

Personal Protective Equipment Worn: \_\_\_\_\_

Cause of Accident/Incident: \_\_\_\_\_

What immediate action was taken to prevent recurrence? \_\_\_\_\_

Additional comments:

Employee's Signature: \_\_\_\_\_ Supervisor's Signature: \_\_\_\_\_

Date \_\_\_\_\_

Date \_\_\_\_\_

Site Safety Representative's Signature

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TOLS005506

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# TIME OIL CO.

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CABLE ADDRESS TIMOIL  
FAX 206-263-8036

86-102(E)E.3

2737 WEST COMMODORE WAY  
P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

August 2, 1996

Ms. Karla Urbanowicz  
Oregon Department of Environmental Quality  
2020 SW Fourth Ave, Suite 400  
Portland, Oregon 97201-4987

RE: STOCKPILE MANAGEMENT PLAN  
TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON

Dear Ms. Urbanowicz:

We received your letter dated June 6, 1996 that contained DEQ's comments on our Soil Stockpile Management Plan for the Time Oil Co. Northwest Terminal (dated April 18, 1996). This letter provides responses to your comments.

1. Tank 38009 was lined in 1989 in anticipation of being used shortly thereafter in conjunction with the biological treatment of the stockpiled soil from the former PCP mixing area. Since that time, the tank was used for that purpose, cleaned, used again to pilot test the onsite wastewater pretreatment system, and then cleaned. Therefore, tank 38009 will not require cleaning prior to use in conjunction with the implementation of the stockpile management plan.
2. Per DEQ's comment, the soil excavated during installation of the new stormwater sump will be added to the soil stockpile.
3. It is currently anticipated that the leachate collected from the sump will be stored and treated in a wastewater treatment unit (as defined by 40 CFR 260.10) prior to discharge and that sediment collected from the sump will be placed back onto the soil stockpile. The stormwater management plan anticipated that tank 1 would be used as a temporary tank for storage of leachate generated during construction and initial operation. Longer-term storage of leachate, if needed, is discussed in our response to comment No. 4 below. As noted in DEQ's comments, leachate management will conform to hazardous waste generator requirements regarding accumulation and storage limitations (e.g., 90 day accumulation/storage limitation) as applicable.
4. DEQ has suggested that leachate occurrence be monitored and recorded, that periodic visual inspections be made of the leachate sump, that the low level alarm be set as low as possible, and that excessive amounts of leachate production (undefined) be addressed through corrective action. As provided for in the soil stockpile management plan, any leachate either currently in the sump or produced

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from the soil stockpile during the planned field activities will be automatically pumped from the leachate sump to temporary tank 1. After construction, the volume of leachate collected in the sump is expected to decrease significantly due to replacement of the stockpile cover. The rate of leachate production during this initial operation period will be closely monitored to determine whether leachate production is sufficient to justify the need for a long-term leachate storage tank. Monitoring will be conducted by observing the frequency in which the level sensor indicates the presence of leachate in the sump and by measuring water levels in the sump through a gauging tube that we propose be installed through the cover (using a watertight penetration) and into the sump (note that the leachate sump will be beneath the cover, and will not be accessible for inspection). The gauging tube also will be used to periodically test the operation of the level sensor and pump installed in the sump. If leachate generation is minimal, as expected, a long-term leachate storage tank will not be needed and the sump will be pumped on an as-needed basis into drums. The drums will be emptied periodically (<90 days following initial input) into the onsite wastewater treatment unit, as is planned for other wastewater generated during onsite environmental activities (e.g., see comment 3). The volume of leachate produced will be recorded, as requested, by measuring the volume of leachate pumped from the sump. The level sensor will be positioned immediately above the level of the pump intake to allow the sensor to be reset to normal (off) status after the leachate has been pumped from the sump.

Although excessive amounts of leachate are not desirable economically (due to treatment costs), if the system operates effectively to contain and remove all leachate produced, then we believe that corrective action should be at Time Oil's discretion. If excessive leachate is caused by conditions that represent concerns regarding releases to the environment (e.g., tears in the cover that also represent a potential for dust generation from the stockpile), then corrective action will be undertaken. The weekly inspections of the stockpile and its management systems are designed to reduce the need for/reliance on substantial corrective action through prevention and maintenance.

5. Per DEQ's comment, the existing HDPE cover will be cleaned with a pressure wash until a visually clean surface is obtained (reference 40 CFR 268.45). Once cleaned in this manner, the cover will be managed as a solid waste.
6. As discussed with you by phone, the former soil treatment area is lined and the liner is covered with gravel. Based on recent tests of stormwater collected from this area, this area is not contaminated. Therefore, Time Oil believes that visual inspections should be sufficient to identify whether contaminated soil is spilled on the surface of the area during stockpile regrading and cleaning of the former treatment tanks.
7. A leak test will be conducted to confirm the integrity of the stormwater sump in the former soil treatment area, as requested by DEQ. Tap water will be used for the test, and as with the water used for the leak test in the new stormwater sump in the soil stockpile area, the leak test water will be discharged to the ground.

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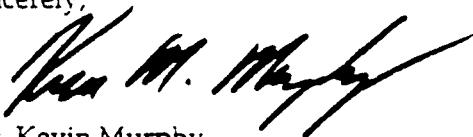
TOLS005508

8. As discussed with you by phone, the material currently covering the stockpile (i.e., Griffolyn T-85, which is 5-ply HDPE reinforced with nylon cord) has proven to be an effective cover for more than 4 years, and we would like to replace the cover with the same material. It should be noted that the cover is not being replaced because the cover has exceeded its useful life (there are some small holes that have developed at abrasion points, but these could easily and effectively be patched), but rather it was determined to be more economical to replace the cover once it is removed for the stockpile regrading and sampling than it would be to replace it, patch the few holes that have developed, and then potentially replace it again in a few years. Also, because the Griffolyn T-85 cover material is reinforced, it will be much more effective at withstanding stresses that develop during periods when the cover is temporarily pulled back and then replaced to remove soil for treatment/disposal, as compared to 20-mil HDPE. In addition, the cover is a temporary cover; it will be exposed and can therefore be regularly inspected and patched, if needed. Also, according to the Griffolyn T-85 supplier, the useful life of Griffolyn T-85 (which is actually 14-15 mils thick rather than 12 as stated in the stockpile management plan) is up to 3 times that of standard 20-mil HDPE. Therefore, unless we hear otherwise from you, we will proceed with a Griffolyn T-85 cover. Attachment 1 provides the specification sheet for Griffolyn T-85.
9. The transition between the 2-inch GSP and the 4-inch HDPE will occur above-ground at the location identified as "Transition for new stormwater piping" on Figure 5 of the plan.
10. The water storage tanks indicated on the form refer to temporary tanks 1 and 2 (during construction) or any other tank that is used on a long-term basis to collect discharge from the leachate collection sump after construction.

#### SUMMARY

We hope that the responses provided in this letter are satisfactory. We look forward to proceeding with the implementation of the soil stockpile management plan upon receipt of written approval from DEQ, and in coordination with the planned Phase I RI and the consolidation of the material in the small stockpile located in the eastern portion of the facility.

Sincerely,



Mr. Kevin Murphy  
Senior Environmental Specialist

cc: Ms. Patricia Dost; Schwabe Williamson and Wyatt

Ms. Leslee Conner; Landau Associates, Inc.

08/02/96 J:\231\001\025\STOCKSP.LET

Attachment 1, Specification Sheet

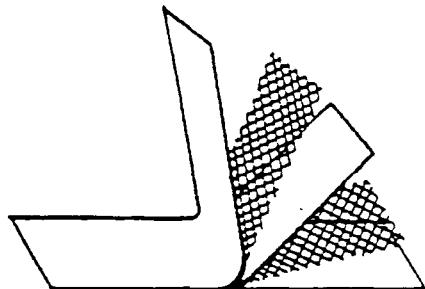
ATTACHMENT 1

# Specification Sheet

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TOLS005510

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## TECHNICAL INFORMATION ON GRIFFOLYN® T-85

• Griffolyn® T-85 is a 5-ply, High Density polyethylene copolymer and nylon yarn laminate. Reinforcement consists of 2 non-woven grids of high strength cord which provides a uniform loading resistance of no less than 1380 pounds per yard in all directions. Nylon reinforcing is in a diamond pattern with no fewer than 96 yarns per square foot. Yarn is suspended in a permanently flexible adhesive media to allow fiber slippage.

## CUSTOMER BENEFITS

Engineered for performance, Griffolyn® means strength, quality and integrity.

- 5-layer reinforced with heavy duty nylon cord to resist punctures and tears
- UV stabilized, cold-crack resistant and waterproof to withstand extended exposure to adverse weather
- Chemical resistance and low permeability to provide maximum, continuous protection
- Flexible and lightweight for ease-in-handling
- Reusable and long life expectancy

## SUGGESTED APPLICATIONS

Custom fabricated to exact specifications and configurations.

- Outdoor storage, pallet, cable reel and drum covers
- Laydown covers and cleanroom enclosures
- Temporary walls, plant dividers and containment tents
- Vapor barriers, building enclosures, dust partitions and concrete curing covers
- Agriculture storage systems, hay covers and windbreaks
- Shipping container covers and liners
- Erosion control and slope protection covers
- Field and equipment covers

## CALL TOLL FREE

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**Griffolyn®**

REEF INDUSTRIES, INC.

P.O. Box 750250

Houston, Texas

77275-0250

Fax: 713/947-2053

Telex: 877-5154

To Texas or outside

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call collect:

713/943-0070

**COLORS**

Griffolyn® T-85 applications are endless. Available colors include black and black/white. T-85 black/white effectively reduces condensation and moisture build-up.

**SIZE**

Stock roll sizes from 4' x 100' to 40' x 100' in increments of 4' widths. Custom sizes up to 140' x 200'. Length and width tolerances are +1% (minimum 2") on stock items. Custom fabrication to exact specifications and configurations.

**OUTDOOR EXPOSURE**

Average 36 to 48 months life expectancy under normal continuous exposure, dependent on color.

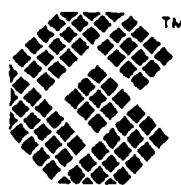
**USABLE TEMPERATURE RANGE**

Minimum -40°F to maximum +170°F

1000

**GRIFFOLYN® T-85 SALES SPECIFICATIONS**

PHYSICAL PROPERTIES AND TYPICAL VALUES			
PROPERTY	TEST METHOD	VALUE	UNITS
Weight per 1,000 sq. ft.	ASTM D-2103	39	pounds per 1,000 sq. ft.
3" tensile md	ASTM D-882	115	pounds
		4500	psi
3" elongation md	ASTM D-882	160	%
PPT tear strength	ASTM D-2582	23	pounds
3 X 8 tongue tear	ASTM D-2261	14.0	pounds
Cold crack	ASTM D-1709 mod.	-40	°F
Drop dart	ASTM D-1709	1700	grams
Hot air shrink 170° F	ASTM D-1204	<2.0	% total area



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# TIME OIL CO.

PHONE 285-2400  
CABLE ADDRESS TIMOL  
FAX 206-283-8036

86-102(E)E.3

2737 WEST COMMODORE WAY  
P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

August 2, 1996

Fitt Environmental  
9013 NE Highway 99, Suite D  
Vancouver, WA 98665

Attn: Scott Morey

RE: REQUEST FOR PROPOSAL  
ENVIRONMENTAL CONSTRUCTION SERVICES  
FOR THE TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON

Dear Mr. Morey:

Your firm is invited to submit a cost proposal for environmental construction services in support of a soil remediation project at Time Oil Company's Northwest Terminal in Portland, Oregon. The scope of work involves implementing those portions of a soil stockpile management plan assigned to "contractor" (included as Attachment 1) for a pentachlorophenol (PCP) affected soil stockpile and conducting the activities described in the scope of work included in Attachment 2 related to the removal of discarded drums and relocation of a small soil stockpile. The successful bidder must provide all labor, equipment, and material necessary to perform the work described in Attachments 1 and 2, except for those services to be performed by Time Oil or its consultant, Landau Associates, Inc., as indicated in the attachments. The terms and conditions of the contract between Time Oil and the successful bidder are included in Attachment 3. Please note that Time Oil reserves the right to supply any equipment and material items necessary to complete the work.

Because of the potential health hazards to contractor's employees associated with, but not limited to, contaminated soil and groundwater, the contractor selected for this work must prepare and implement a project-specific health and safety plan that is at least as stringent as the project-specific health and safety plan prepared by Landau Associates, or the contractor may adopt Landau Associates' health and safety plan. A copy of this health and safety plan is included as Attachment 4.

Your cost proposal, in the form of a completed bid schedule (Attachment 5) and the additional information requested below, must be delivered (or faxed) to Time Oil Company (Attention Mr. Kevin Murphy; 2737 W. Commodore Way, Seattle, WA 98199-1233; fax (206) 285-1000

TOLS005513

BZTO104(e)042334

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# TIME OIL CO.

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CABLE ADDRESS TIMOL  
FAX: 206-263-8036

2737 WEST COMMODORE WAY  
P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

August 2, 1996

Glacier Environmental Services  
12521 Evergreen Drive, Suite A  
Mukilteo, WA 98275

Attn: Steve Miles

**RE: REQUEST FOR PROPOSAL  
ENVIRONMENTAL CONSTRUCTION SERVICES  
FOR THE TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON**

Dear Mr. Miles:

Your firm is invited to submit a cost proposal for environmental construction services in support of a soil remediation project at Time Oil Company's Northwest Terminal in Portland, Oregon. The scope of work involves implementing those portions of a soil stockpile management plan assigned to "contractor" (included as Attachment 1) for a pentachlorophenol (PCP) affected soil stockpile and conducting the activities described in the scope of work included in Attachment 2 related to the removal of discarded drums and relocation of a small soil stockpile. The successful bidder must provide all labor, equipment, and material necessary to perform the work described in Attachments 1 and 2, except for those services to be performed by Time Oil or its consultant, Landau Associates, Inc., as indicated in the attachments. The terms and conditions of the contract between Time Oil and the successful bidder are included in Attachment 3. Please note that Time Oil reserves the right to supply any equipment and material items necessary to complete the work.

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Your cost proposal, in the form of a completed bid schedule (Attachment 5) and the additional information requested below, must be delivered (or faxed) to Time Oil Company (Attention Mr. Kevin Murphy; 2737 W. Commodore Way, Seattle, WA 98199-1233; fax (206) 285-

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TOLS005514

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# TIME OIL CO.

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FAX 206-283-6036

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P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

August 2, 1996

Advanced Disposal Technologies Inc.  
222 SW Harrison, Suite G03U  
Portland, OR 97201

Attn: Kenneth Pepperling

RE: REQUEST FOR PROPOSAL  
ENVIRONMENTAL CONSTRUCTION SERVICES  
FOR THE TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON

Dear Mr. Pepperling:

Your firm is invited to submit a cost proposal for environmental construction services in support of a soil remediation project at Time Oil Company's Northwest Terminal in Portland, Oregon. The scope of work involves implementing those portions of a soil stockpile management plan assigned to "contractor" (included as Attachment 1) for a pentachlorophenol (PCP) affected soil stockpile and conducting the activities described in the scope of work included in Attachment 2 related to the removal of discarded drums and relocation of a small soil stockpile. The successful bidder must provide all labor, equipment, and material necessary to perform the work described in Attachments 1 and 2, except for those services to be performed by Time Oil or its consultant, Landau Associates, Inc., as indicated in the attachments. The terms and conditions of the contract between Time Oil and the successful bidder are included in Attachment 3. Please note that Time Oil reserves the right to supply any equipment and material items necessary to complete the work.

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Your cost proposal, in the form of a completed bid schedule (Attachment 5) and the additional information requested below, must be delivered (or faxed) to Time Oil Company (Attention Mr. Kevin Murphy; 2737 W. Commodore Way, Seattle, WA 98199-1233; fax (206) 285-

TOLS005515

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# TIME OIL CO.

2737 WEST COMMODORE WAY  
P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

August 2, 1996

InterMountain West  
9025 SW Hillman Ct., Suite 3126  
Wilsonville, OR 97070

Attn: Steve Pearson

RE: REQUEST FOR PROPOSAL  
ENVIRONMENTAL CONSTRUCTION SERVICES  
FOR THE TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON

Dear Mr. Pearson:

Your firm is invited to submit a cost proposal for environmental construction services in support of a soil remediation project at Time Oil Company's Northwest Terminal in Portland, Oregon. The scope of work involves implementing those portions of a soil stockpile management plan assigned to "contractor" (included as Attachment 1) for a pentachlorophenol (PCP) affected soil stockpile and conducting the activities described in the scope of work included in Attachment 2 related to the removal of discarded drums and relocation of a small soil stockpile. The successful bidder must provide all labor, equipment, and material necessary to perform the work described in Attachments 1 and 2, except for those services to be performed by Time Oil or its consultant, Landau Associates, Inc., as indicated in the attachments. The terms and conditions of the contract between Time Oil and the successful bidder are included in Attachment 3. Please note that Time Oil reserves the right to supply any equipment and material items necessary to complete the work.

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Your cost proposal, in the form of a completed bid schedule (Attachment 5) and the additional information requested below, must be delivered (or faxed) to Time Oil Company (Attention Mr. Kevin Murphy; 2737 W. Commodore Way, Seattle, WA 98199-1233; fax (206) 285-

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TOLS005516

BZTO104(e)042337

7833) by 10:00 a.m. August 20. The contract is expected to be awarded by August 23. Time for completion of the project shall be 25 working days (Monday through Friday), starting from the date of award of the contract.

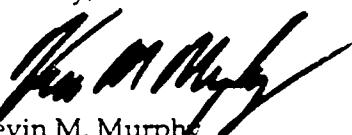
In addition to the completed bid form, the bidder shall submit the following information:

- A brief but complete construction plan that includes, at a minimum, a preliminary construction schedule, indicating major construction milestones and the date upon which substantial completion of the project will be achieved. The contractor shall submit updates to this schedule during execution of the work any time the schedule changes.
- A description and/or sketch describing the design of the two planned decontamination pads (i.e., the pad for the drum removal and small stockpile relocation work, and the pad to be located in the former soil treatment area for the work associated with the stockpile management plan).
- A letter signed by a company official stating that all personnel assigned to work at the site will meet all necessary training and certification requirements to comply with 29CFR 1910.120 Hazardous Waste Operation and Emergency Response, Oregon Administrative Rules (OAR 437), and the project specific health and safety plan.
- A résumé of the superintendent to be assigned to the project.

A site walk-through is scheduled for 1:00 p.m. August 12. Attendance at this walk-through is not mandatory, but is highly encouraged.

Thank you for your interest in this project. Please contact me at (206) 286-6443 if you have any questions.

Sincerely,



Kevin M. Murphy

Attachment 1, Stockpile Management Plan  
Attachment 2, Drum Removal and Small Stockpile Relocation Scope of Work  
Attachment 3, Contract Terms and Conditions  
Attachment 4, Landau Associates' Health and Safety Plan  
Attachment 5, Bid Schedule

cc: Ms. Patty Dost, Schwabe Williamson & Wyatt  
Ms. Leslee Conner, Landau Associates, Inc.  
No. 231001.25 & .60

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ATTACHMENT 1

## **Stockpile Management Plan**

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**Report**

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**Stockpile Management Plan  
Time Oil Northwest Terminal Facility  
Portland, Oregon**

August 1, 1996

Prepared for

**Time Oil Co.  
2737 W. Commodore Way  
Seattle, WA 98199-1233**

Prepared by



**LANDAU ASSOCIATES, INC.**

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## 1.0 INTRODUCTION

This document provides a short-term stockpile management plan (SMP) for a pentachlorophenol (PCP) affected soil stockpile at the Time Oil Northwest Terminal located in Portland, Oregon. The Oregon Department of Environmental Quality (DEQ) has requested that remediation of the stockpiled soil be completed or successfully underway within 5 years of entering an agreement with DEQ. Until remediation is complete, a SMP will be implemented to prevent contaminant releases from the affected area.

The intent of this SMP is to provide a strategy for management of the PCP affected soil stockpile and the adjacent former soil treatment area, including stormwater management, until a permanent disposition of the soil is agreed upon. Evaluation of appropriate treatment and disposal options for the PCP affected soil is not addressed in the SMP but will be a priority task of an upcoming remedial investigation/feasibility study (RI/FS).

### 1.1 SITE BACKGROUND

The Time Oil Northwest Terminal covers approximately 52 acres and is located adjacent to the Willamette River in the industrialized Rivergate area of north Portland, Oregon (Figure 1). In 1988, Time Oil contracted with ECOVA to develop a slurry bioreactor soil treatment system at the facility to treat soil contaminated with PCP as a result of historical PCP mixing operations at the terminal. The soil stockpile area and treatment system were constructed in late 1988. In 1989, approximately 3,000 yd<sup>3</sup> of PCP-contaminated soil were excavated from the former PCP mixing area and placed in the lined soil stockpile area adjacent to the treatment system (Figure 2). The treatment operations were terminated in 1989 when ECOVA was unable to reduce the concentration of PCP in the soil to 0.5 mg/kg.

The stockpile is currently maintained onsite in a bermed, lined, and covered area just southwest of the former PCP mixing area and adjacent to the treatment area as shown on Figure 2. In October 1995, DEQ requested that a plan and schedule for treatment and ultimate disposal of the soil in the stockpile be developed as part of a facility RI/FS and in the interim, that the integrity of the cover on the stockpile be maintained, runon and runoff be controlled, and self inspection occur on a regular basis throughout the RI/FS process.

Current stockpile management consists of a 20 mil PVC liner underlying the stockpile, a 12 mil fabric-reinforced, high density polyethylene (HDPE) cover overlying the stockpile, a soil

berm system surrounding the stockpile, a hydrotube cover anchor system, and a sump to collect leachate (if any) from the stockpile. The liner and cover extend beyond the stockpile and over the berm system.

The adjacent former soil treatment area is surrounded by a soil berm and is lined with a 20 mil PVC liner covered by approximately 6 inches of sand and gravel. An approximate 500-gallon stormwater collection sump is present in the northern corner of this area and is manually pumped. A similar sump is present under the cover in the northern corner of the soil stockpile containment area.

## 1.2 GOALS AND OBJECTIVES

The general goals and objectives of the SMP are to provide an organized approach to upgrade the current PCP soil stockpile management system, improve stormwater collection, and establish standardized inspection and recordkeeping procedures. The overall stormwater management strategy is to minimize stormwater pollution potential and provide a cost-effective method for handling stormwater runoff and water generated through site investigations. The SMP provides recommendations for capital improvements to existing stormwater pollution prevention systems operation and maintenance procedures.

## 1.3 HYDROLOGIC CONSIDERATIONS

The SMP is based on evaluation of drainage areas and estimated stormwater runoff volumes to size appropriate discharge system components.

Stormwater runoff volumes were estimated to size storage and conveyance systems for the stockpile area and the former soil treatment area. The City of Portland Bureau of Environmental Services has indicated that local practice typically uses the 2-year, 24-hour storm as a design storm and the rational method (Roberson et al. 1988) of determining peak flow rates for small drainage areas less than 10 acres. The 2-year, 24-hour storm curve of a rainfall intensity-duration-frequency curve for the Portland, Oregon area, as provided by the City of Portland Bureau of Environmental Services (1996), was chosen as a design storm for the SMP. This curve shows a maximum intensity of approximately 2 inches per hour and a total rainfall of 2.4 inches for a 2-year, 24-hour storm event. This would result in approximately 21,000 gallons and 15,000 gallons of runoff in the stockpile area and former soil treatment areas, respectively. The rational method was used to calculate stormwater volumes using these rainfall data. Volumes were calculated as follows:

$$V = (C)(I)(A)(T)/96.3$$

where:

V = stormwater runoff volume, in gallons

C = rational constant, dimensionless

I = rainfall intensity, in inches/hour

A = runoff area, in ft<sup>2</sup>

T = duration of rainfall intensity, in minutes

A rational constant of 1.0 was selected for the stockpile area and the former soil treatment area, since cover and liner, respectively, are impervious. The above equation was used to calculate an accumulated stormwater volume for the peak 5 minutes and each 10-minute duration of the storm event to size collection sumps and swales, piping, and pumps.

The peak flow rate of stormwater from the stockpile is estimated to be approximately 300 gallons per minute (gpm); however, this peak flow rate is anticipated to be sustained for less than 10 minutes. To avoid the costs associated with installing a 300 gpm pumping system, stormwater flow can be equalized by accumulating water in a collection sump and temporarily on the liner using the effective volume of the conveyance swale.

Using the above method, the stockpile area stormwater conveyance swale and sump were calculated to need a combined volume of 2,700 gallons, assuming the sump is equipped with a pump capable of 110 gpm. Trench and/or sump volume may be reduced if a higher flow rate pump is selected, but the selection of a 110 gpm pump is more cost effective. A minimum 350-gallon sump and minimum 2,350-gallon conveyance swale were selected to meet this volume requirement. A 2-inch minimum diameter galvanized steel pipe was selected for discharge of stockpile area stormwater. An identical pump will be installed in the former soil treatment area sump so that a common spare can be retained. The discharge pipelines from the stockpile stormwater collection sump and the former soil treatment area stormwater collection sump pumps will convey the stormwater through a common 4-inch diameter HDPE pipe to the existing storm drain discharging to the Willamette River. In addition, a pump capable of 10 gpm versus 20 ft of total dynamic head and a 1½-inch flexible, heavy duty PVC discharge hose was selected for the leachate collection sump.

## 2.0 STOCKPILE MANAGEMENT PLAN

Upgrades to existing stormwater controls will provide for improved collection and discharge of site stormwater. Existing controls consist of a cover, liner, berm, and sump system that isolates the PCP affected stockpile from stormwater and underlying soil and collects stockpile leachate and runoff from the former treatment area. Improvements consist of removal of any water ponding on top of cover, leachate sump evaluation (and upgrading, if necessary), PVC liner assessment, stockpile grading, HDPE cover repair, stormwater sump construction, stormwater conveyance system construction, removal of solids from the former biotreatment system, and minor road grading to prevent stormwater runoff from adjacent areas and to prevent accumulation of stormwater adjacent to the soil stockpile and previous soil treatment area.

### 2.1 MODIFICATION TO EXISTING STORMWATER CONTROLS

The following modifications to the existing stormwater controls are required to meet the goals of the SMP. The implementation of the capital improvements to the stockpile stormwater management system will be accomplished using a licensed independent construction contractor. The construction tasks to be accomplished are discussed in the following sections.

#### 2.1.1 STOCKPILE AREA

Several areas in the vicinity of the stockpile area will be modified during the construction phase of the SMP to improve management practices. The contractor will furnish two rental tanks (temporary tanks 1 and 2) placed at the locations indicated on Figure 3. The tanks will be mobile epoxy coated and lined steel tanks and each will have a capacity of approximately 21,000 gallons. These tanks will be used for storing stockpile area runoff during construction, stockpile leachate (if any), leachate sump volumetric test water, bioreactor wash water, and contractor decontamination water. The soil berm and PVC liner comprising the treatment area containments will serve as secondary containment for the temporary tanks. At the completion of the construction phase, the contents of these tanks will be characterized, treated if necessary, and disposed of in an appropriate manner by Time Oil. The contractor will then clean the tanks and remove them from the site.

To protect the PCP affected stockpiled soil during this phase, the stockpile will remain covered in the event of wet or very dry or windy weather. Runoff that might be generated during

the construction phase will be maintained within the bermed area around the stockpile and periodically pumped to temporary tank 1 for storage.

Existing accumulated stormwater, if any, on top of the stockpile cover will be discharged to the ground at the site in an area known to be relatively unaffected by releases of contaminants at the site. Ponded stormwater on the stockpile cover previously has been analyzed for priority pollutant metals, total toxic organics, petroleum hydrocarbons, and phenols; and the only detected constituent of potential significance was a very low concentration of zinc. Any stormwater that may have seeped through the cover to the liner will be pumped by the contractor into temporary tank 1 for storage and appropriate management.

The leachate collection sump for the stockpile, located north of the stockpile (Figure 2), will be evaluated and repaired as necessary to ensure that it does not leak. The sump will be fitted with a liquid detection system with a submersible pump to automatically transfer any accumulated leachate. Any leachate in the sump will be pumped to temporary tank 1 for storage and any accumulated sediment in the sump will be returned to the PCP affected soil stockpile. The sump will subsequently be visually evaluated by Landau Associates to identify potential areas of leakage. The sump also will be tested for leakage by Landau Associates using protocol described in *Volumetric Tank Testing: An Overview* (EPA 1989) using a 0.1 gallon per hour leakage rate as a failure criteria. Volumetric test water will be emptied into temporary tank 1 upon test completion. Repairs to the sump will be made by the contractor, if warranted, using a nonshrink grout and elastometric sealant, and the sump will be retested after repair to verify leakage is within limits. In addition, the PVC liner will be sealed to the sump as shown in the detail indicated on Figure 4. Upon test completion, the sump will be equipped with a pump and flexible discharge piping (e.g., fire hose) leading to temporary tank 1 for storage and future disposal.

The condition of the existing PVC liner system underlying the stockpile will be evaluated by opportunistic visual spot examination by Landau Associates personnel during the initial stockpile regrading activities. Landau Associates will provide Time Oil with recommendations for repair to the liner system, if required. The evaluation will be incidental and principally limited to the area immediately adjacent to the leachate collection sump and new stormwater collection sump. This evaluation will take place during stockpile regrading. The assessment will be limited so that the liner will not be damaged during the assessment.

The improvement of existing stormwater drainage patterns across the stockpile is planned under the SMP (Figure 3). These improvements will allow for the collection and discharge of

stormwater from the stockpile area to a nearby storm drain that discharges to the Willamette River as shown on Figures 5 and 8. Stormwater drainage improvements will involve regrading around the perimeter of the stockpile to provide positive drainage. The HDPE cover will be removed to permit regrading by the contractor. The stockpile regrading will be conducted such that soil is not removed from the containment area.

Figure 2 indicates planned stockpile regrading areas, and Figure 3 illustrates the desired stockpile perimeter with new runoff pattern. As indicated on Figure 2, a well point is reported to be located beneath the stockpile and is reportedly marked. Efforts will be made to locate and protect this well point during stockpile regrading and consolidation. A sloped drainage swale will be developed by the contractor at the toe of the stockpile within the containment berm to convey stormwater to the new collection sump (Figures 3 and 6). The drainage swale will be approximately 2 ft wide at the base and maintain a 1 percent slope toward the proposed stormwater collection sump. This swale will be lined with the HDPE as illustrated on Figure 6.

The existing HDPE cover on the stockpile has a few tears (see Figure 2) and will be replaced. Upon completion of stockpile drainage improvements, the existing HDPE cover will be removed, cleaned of soil, and folded. The new HDPE cover will be furnished by Time Oil, installed on the stockpile by the contractor, and secured with tires and the existing hydrotube anchor system.

A new stormwater collection sump will be installed to collect and discharge stormwater from the stockpile area. This sump will be installed near the northern corner of the stockpile area adjacent to the leachate collection sump so that it does not interfere with existing underground product conveyance piping systems (Figure 5). Modifications to the stockpile, as described previously, will induce stormwater to flow radially outward from the stockpile into the conveyance swale and into this sump. The sump will consist of a precast monolithic concrete vault approximately 4 ft wide by 4 ft long by 4 ft deep. Landau Associates will test the sump for leaks using the protocol described in EPA 1989. Should the sump fail this test, the contractor will locate the leak, and reseal the sump. The sump will then be retested. Since clean tap water will be used for volumetric leak testing, it will be discharged to the ground in a nonaffected area of the site. As shown on Figure 5, the stormwater collection sump will be outfitted with a pump and HDPE discharge piping to transfer stormwater to a nearby existing storm drain that discharges to the Willamette River. The pump will be equipped with a level sensor to facilitate automatic operation of the sump, and a branch line will be installed in the pump discharge pipeline to facilitate an isolated hose discharge. A manhole will be constructed on the existing storm drain pipeline at the

point of connection of the stormwater discharge line. A 115-volt AC electrical line will be extended from the warehouse building to the two sump locations in the stockpile area to power the pumps. This line will be enclosed in an electrical conduit (Figure 5).

### 2.1.2 FORMER SOIL TREATMENT AREA

Water and wet soil (treatment residuals) may be present in the bottoms of the five bioreactors and one clarifier of the former soil treatment system that is located adjacent to the stockpile (Figure 2). Bioreactors and clarifier will be dewatered to the extent practicable prior to removing any soil. The water will be conveyed to temporary tank 2. Soil will be removed from the tanks and dewatered to the extent practicable by gravity drainage. After gravity dewatering is complete, soil will be placed on the PCP-contaminated soil stockpile. The bioreactors will be dry swept and pressure-washed to remove remaining soil residuals and wash water will be pumped to temporary tank 2 for storage.

The exposed ground surface in the former treatment area will be visually evaluated by Landau Associates to identify any areas where contaminated soil may exist that threatens stormwater runoff quality. Should contaminated soil be identified, it will be excavated and placed on the stockpile by the contractor. Any excavated soil will be replaced with clean import fill material. Stormwater in the former soil treatment area flows northward into an existing stormwater sump in the northern corner of this area.

Landau Associates will observe the existing conditions of this sump and recommend improvements, if necessary, based upon field observations. Since this sump is used to collect stormwater that has not been in contact with contaminated soil, leak testing, as described previously for the stockpile leachate collection sump, is not considered necessary. The existing sump will be outfitted with a pump and discharge piping. The pump will be equipped with a level sensor to facilitate automatic stormwater discharge. The stormwater discharge line will connect to the existing storm drain discharging to the Willamette River (Figure 5). The stockpile and treatment area stormwater discharge pumping system will use a common discharge pipeline.

The pumping and conveyance system will be installed by the contractor as indicated on Figures 5 and 7. A 115-volt AC electrical line will be extended from the warehouse building to the sump location in the former soil treatment area to power the pump (Figure 5). This line will be enclosed in an electrical conduit as shown.

As indicated on Figure 3, a high spot is present along the road shoulder at the southwest corner of the treatment area. This obstruction causes stormwater to accumulate in an area on the southwest side of the stockpile area. This high spot will be graded by the contractor to provide for positive drainage in this area so water does not pond adjacent to the stockpile contaminated area. Excavated material will be placed, to the extent practical, in the low area on the southwest side of the stockpile.

### 2.1.3 ADDITIONAL CONTRACTOR RESPONSIBILITIES

The contractor will provide qualified personnel necessary to complete the tasks described herein with a crew consisting of at least two appropriately qualified persons whenever work is accomplished at the site. Contractor personnel will have demonstrated experience conducting similar work. All contractor personnel will be health and safety trained in accordance with OSHA, 29 CFR 1910.120.

The contractor will be responsible for mobilization and demobilization of all personnel, equipment, and materials necessary to complete the work described herein, unless otherwise stated.

Upon arrival at the site, the contractor will inspect existing site conditions and prepare an equipment decontamination area within the former soil treatment area. The decontamination pad will consist of a bermed area lined with 40 mil HDPE for equipment washing or an approved alternative pad design. A pressure washer and accessories will be provided by the contractor for this purpose. Decontamination water will be transferred to temporary tank 1 for storage. The contractor will provide the necessary means to prevent contamination of the existing surface with the treatment area.

The contractor will prepare a project specific health and safety plan, or the contractor may elect to adopt Landau Associates' health and safety plan as their own. Landau Associates' health and safety plan will be made available to the contractor for reference once the contract is awarded. The contractor will be responsible for providing their own personal protective equipment (PPE) and disposing of it properly upon project completion. The contractor will also provide all personnel decontamination supplies, including provisions for boot wash and all other supplies required by the contractor's health and safety plan.

The contractor will submit three copies each of all manufacturer's manuals, instructions, and certificates to Time Oil covering mechanical, electrical, piping, and other material and equipment included in the design. The contractor will also maintain and prepare as-built drawings of the

completed work. As-built drawings will be submitted to Time Oil in triplicate along with the manufacturer's manuals. Landau Associates will have a field engineer present during the duration of construction activities to respond to contractor's questions to document field activities, and to conduct other related tasks as described above and in the following sections.

#### 2.1.4 MAJOR PROCESS EQUIPMENT

The following major process equipment will be supplied by the contractor during the construction phase of the SMP:

##### A. Former Treatment Area Sump Pump P-1

1. The pump will be a submersible sump pump with open, 5 $\frac{1}{4}$ -inch impeller, manufactured by Barnes Pumps, Inc. Model SE-51A, or equivalent.
2. The pump will have a primary operating point of 110 gpm at discharge pressure of 11 ft of total dynamic head, with a minimum shut off head of 24 ft. Pump will be capable of 80 gpm at 15 ft of total dynamic head and 140 gpm at 6 ft of total dynamic head.
3. The motor will be 110 volt, single-phase, 60 Hz electric power with a minimum rating of  $\frac{1}{2}$  hp.
4. High and low level switches will be provided, as indicated on Figure 7.

##### B. Leachate Sump Pump P-2

1. The pump will be a submersible sump pump with open, 5 $\frac{1}{4}$ -inch impeller, manufactured by Barnes Pumps, Inc. Model SE-51A, or equivalent.
2. The pump will have a primary operating point of 10 gpm at discharge pressure of 23 ft of total dynamic head, with a minimum shut off head of 24 ft. Pump will be capable of 20 gpm at 22 ft of total dynamic head and 30 gpm at 21 ft of total dynamic head.
3. The motor will be 110 volt single-phase, 60 Hz electric power with a minimum rating of  $\frac{1}{2}$  hp.
4. A low level switch will be provided, as indicated on Figure 7.

##### C. Sump Pump P-3

1. The pump will be a submersible pump with open, 5 $\frac{1}{4}$ -inch impeller, manufactured by Barnes Pumps, Inc. Model SE-51A, or equivalent.
2. The pump will have a primary operating point of 110 gpm at discharge pressure of 11 ft of total dynamic head, with a minimum shut off head of 24 ft. Pump will operate at 80 gpm at 15 ft of total dynamic head and 140 gpm at 6 ft of total dynamic head.
3. The motor will be 110 volt single-phase, 60 Hz electric power with a minimum rating of  $\frac{1}{2}$  hp.

4. High and low level switches will be provided, as indicated on Figure 7.

D. Piping System 1

1. The piping system will consist of 2-inch diameter flexible, heavy-duty PVC discharge hose supplied by USA Blue Book, Stock Number 44194 with 50-ft lengths and ends equipped with male NPSM and female NPSM threads.
2. The pipe will be field jointed with gaskets per manufacturer's recommendation.
3. The piping system will include a 2-inch diameter brass swing check valve, Dynaquip Model Number 184008 and two 2-inch diameter brass ball valves, Grainger Stock Number 6X219, or equivalent.

E. Piping System 2

1. The piping system will consist of 4-inch diameter HDPE pipe, manufactured by Polaris Pipe, Model Number SDR17 and standard 2-inch diameter Schedule 40 galvanized steel pipe as shown on the drawings.
2. The joints will be field welded in accordance with the manufacturer's recommendation or by grooved end mechanical couplings. Galvanized steel piping will be coupled with standard threaded pipe fittings.
3. Fittings for HDPE will be HDPE SDR 17 for butt fusion welding or grooved end mechanized coupling. Galvanized steel pipe fittings shall be threaded. The piping system will include two 2-inch diameter brass swing check valves, Dynaquip Model Number 184008, and four 2-inch diameter brass ball valves, Grainger Stock Number 6X219, or equivalent.

F. Manhole

The manhole to be installed on the existing stormwater discharge pipeline will be a standard fiberglass or concrete ring manhole. The size and depth will be determined after the location and depth of existing stormwater pipelines is field verified at the point of connection.

G. Stockpile Cover

A 12 mil, fabric-reinforced HDPE cover for the stockpile will be provided by Time Oil.

H. Stockpile Stormwater Collection Sump

The sump will be a precast concrete vault approximately 4 ft by 4 ft by 4 ft.

I. Temporary Tank 1

The tank will be a tire-mounted, 21,000-gallon, epoxy-coated and lined steel tank approximately 8 ft by 40 ft tank, or equivalent.

J. Temporary Tank 2

The tank will be a tire-mounted, 21,000-gallon, epoxy-coated and lined steel tank approximately 8 ft by 40 ft tank, or equivalent.

## **2.2 STORMWATER TREATMENT AND DISCHARGE**

The SMP involves a characterization of stormwater runoff for the purpose of evaluating treatment and discharge requirements. Stormwater runoff sampling and analytical results have been conducted by Time Oil; analytical results are reported in Table 1. Sample locations are indicated on Figure 2. Based on the results of this sampling, only trace constituents are present in the stormwater runoff from the stockpile. Based on this information, treatment of the stormwater does not appear warranted.

### **3.0 ROLES AND RESPONSIBILITIES**

A contractor will be hired by Time Oil to provide modifications to the existing stormwater controls. Landau Associates will offer assistance to Time Oil for selection of a qualified contractor. Landau Associates will provide engineering direction to the contractor including oversight by a field engineer during the construction phase. After construction, Time Oil will be responsible for inspections and operation and maintenance of system provided under the SMP. Landau Associates will serve as consultant to Time Oil after construction.

## **4.0 OPERATION AND MAINTENANCE**

The operation and maintenance of the SMP will be conducted by Time Oil personnel under the guidance of Landau Associates. Operation and maintenance will involve training of Time Oil personnel by Landau Associates, inspection and routine maintenance of the stockpile area, and recordkeeping requirements.

### **4.1 - TRAINING**

Landau Associates will provide training to Time Oil personnel in operation and maintenance of the stockpile area and stormwater equipment installed during the construction phase of this plan. Training will encompass pump operation and maintenance, sump cleaning, stockpile inspections, and recordkeeping requirements.

### **4.2 INSPECTION AND MAINTENANCE**

Routine inspection and maintenance of the stockpile area will be conducted by Time Oil personnel on a weekly basis to verify stockpile management. Stockpile area inspections will also be conducted after significant storm events. The inspections will focus on HDPE cover integrity, cover anchorage, stockpile runoff control, and sump conditions. Repairs will be performed, as needed, based upon the results of the inspections. Routine maintenance will include removing sediment from the sums and cleaning pump intakes.

### **4.3 RECORDKEEPING**

The stockpile management plan inspection form (Form 1) or equivalent will be utilized to verify that consistent inspections occur. The original inspection forms will be maintained by the Time Oil project manager in the Time Oil Environmental Services Department in Seattle, Washington. Copies of the forms will be kept in a file at the Time Oil Northwest Terminal in Portland, Oregon.

## **5.0 REPORTING**

Within 30 days of completion of the construction phase, a stockpile management report will be prepared for submittal to DEQ that documents the construction, including as-built drawings.

## 6.0 SCHEDULE

The implementation schedule is such that construction of the modifications to the existing stormwater controls is conducted in a timely manner and should be completed by mid October 1996 assuming that there are no delays with permitting the NPDES discharge. A stockpile management report documenting field activities and containing as-built drawings will be submitted within 30 days of construction completion. This implementation will be integrated with ongoing site operations, as necessary. Existing facilities at the site will be protected and not likely impacted by implementation of the SMP.

## 7.0 REFERENCES

City of Portland, Bureau of Environmental Services. 1996. Personal communication with Lisa Camelli. March 7.

EPA. 1989. *Volumetric Tank Testing: An Overview*. EPA/625/9-89/009. U.S. Environmental Protection Agency, Center for Environmental Research Information, Office of Research and Development, Cincinnati, Ohio. April.

Roberson, J., J. Cassidy, M. Chaudhry. 1988. *Hydraulic Engineering*. Boston, Massachusetts: Houghton Mifflin Company.

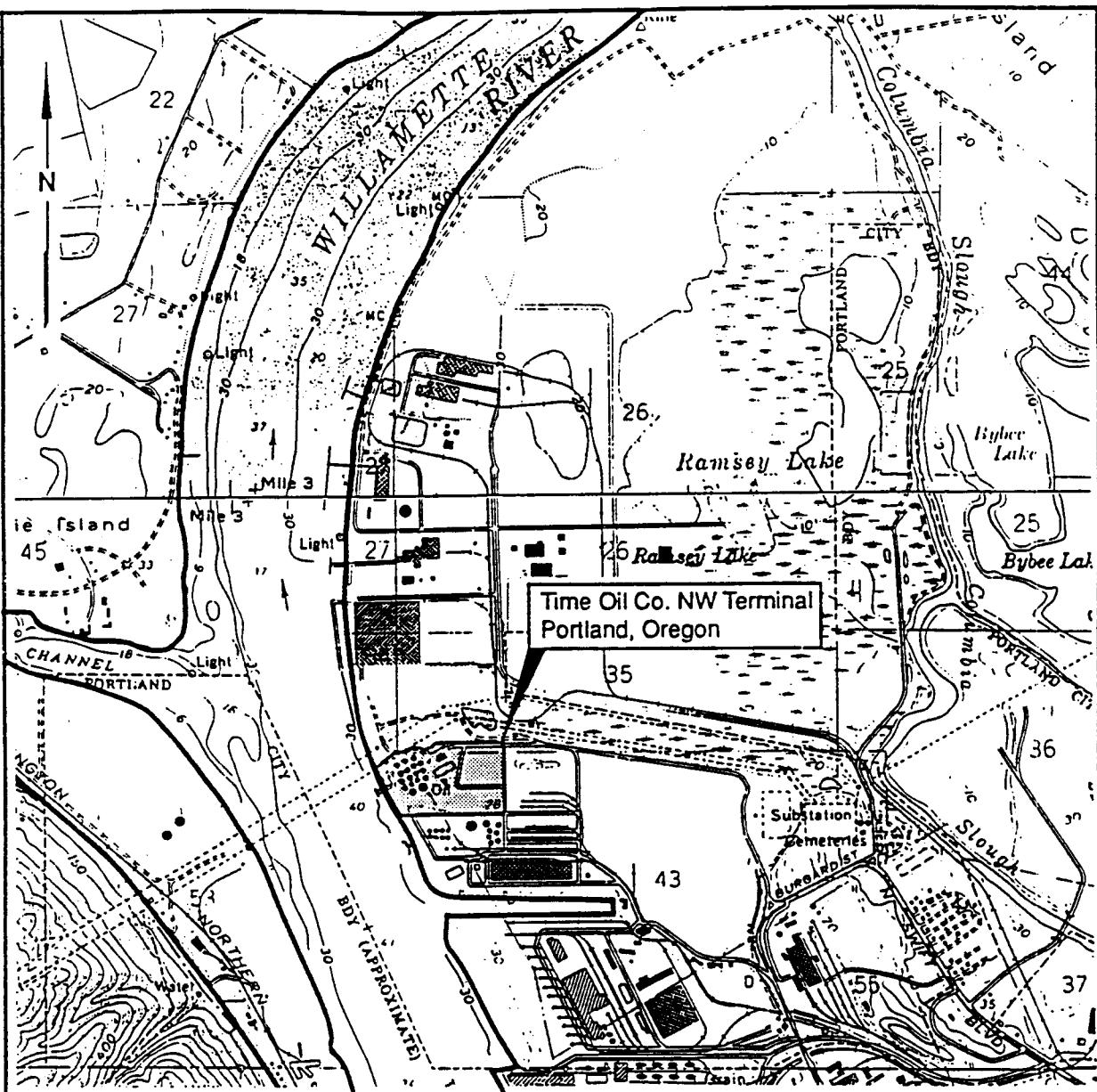
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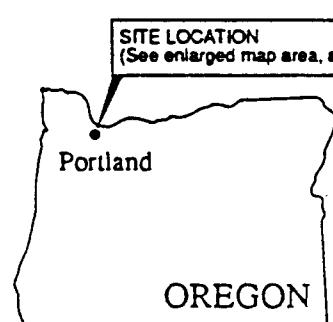
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Scale in Miles

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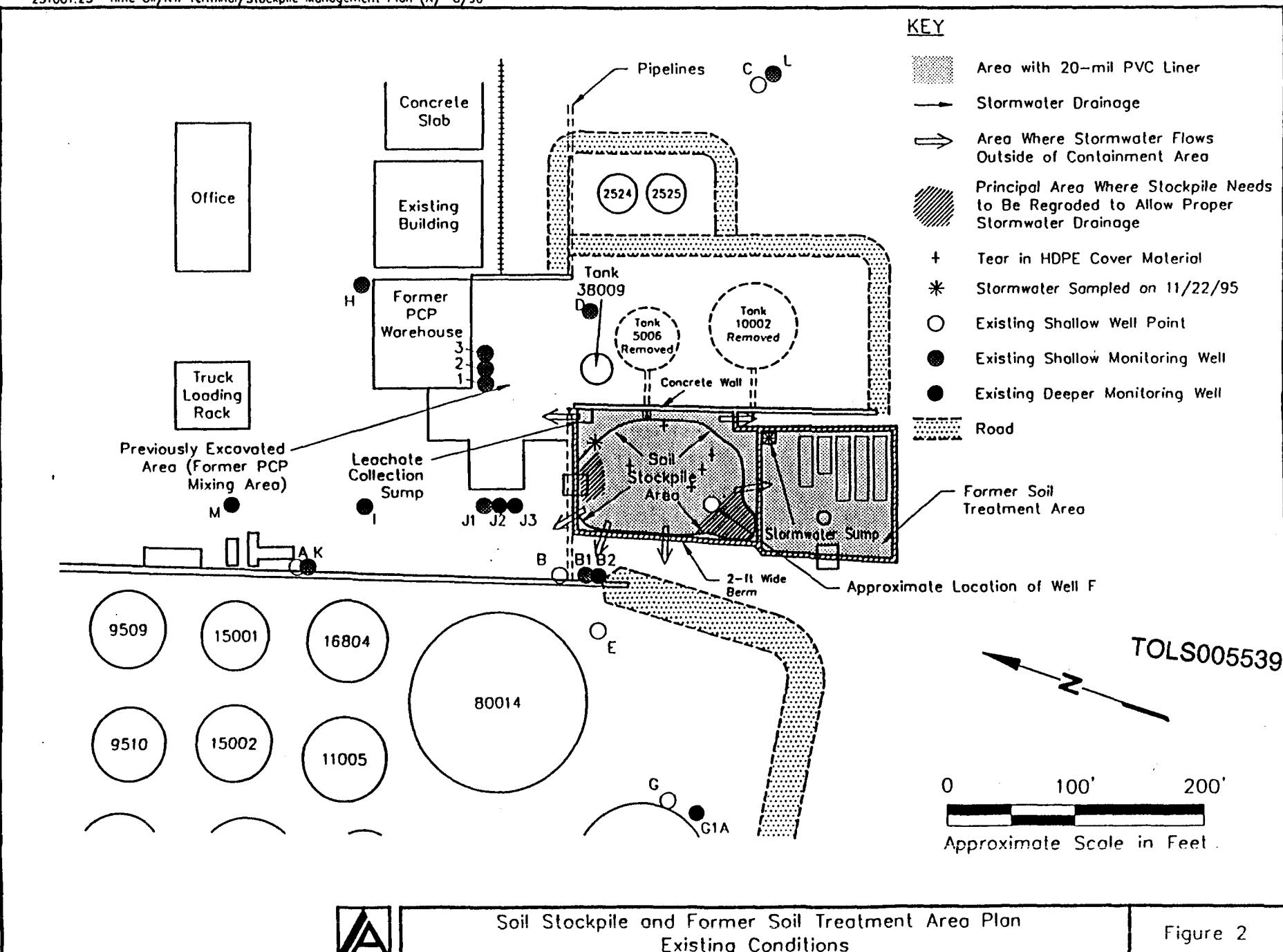
Vicinity Map

Figure 1

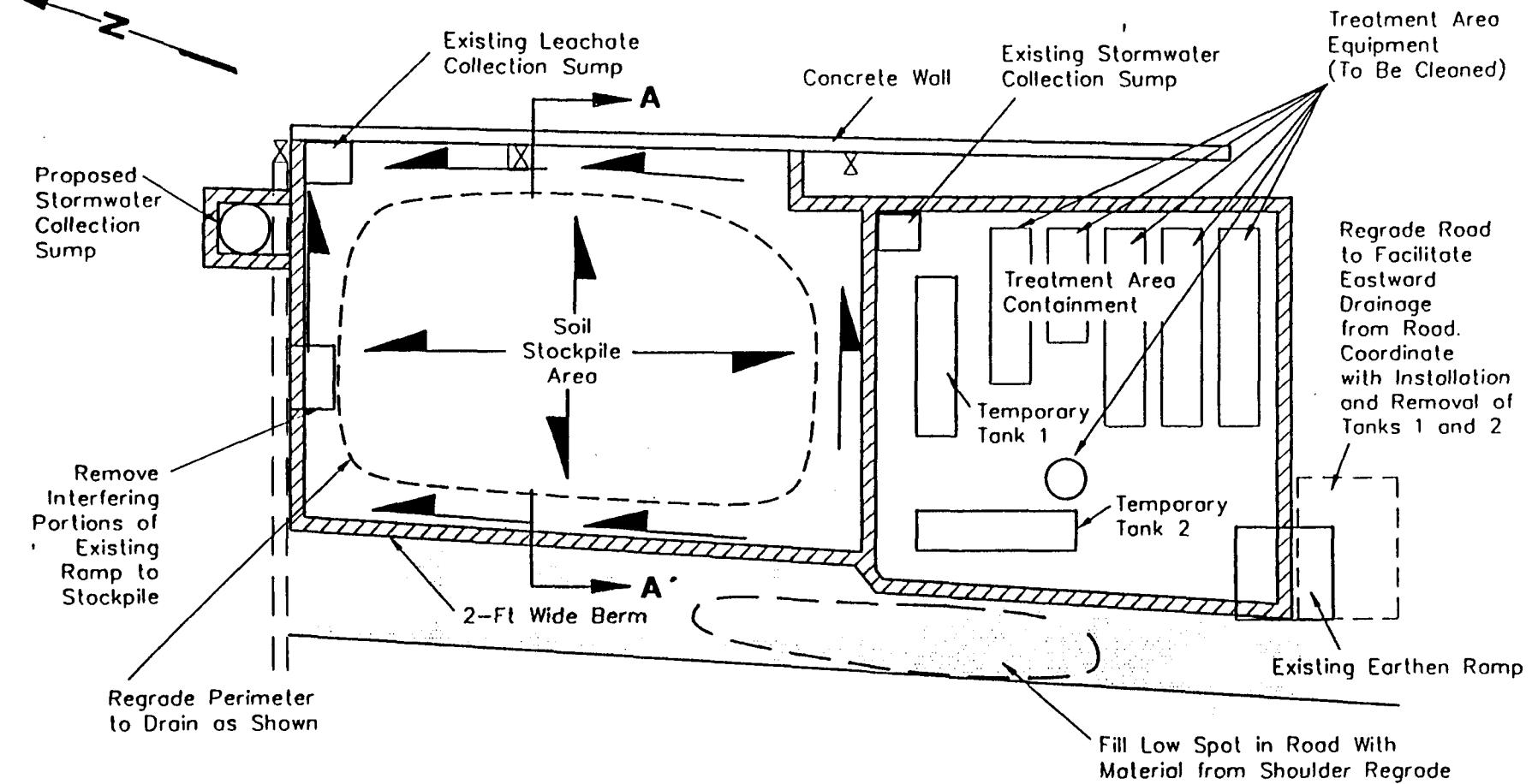
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**KEY**

- Stormwater Drainage Direction
- Modified Stockpile Perimeter
- Approximate Low Spot Location
- Road

**A**

Cross Section Location  
and Identification  
(Refer to Figure 6)

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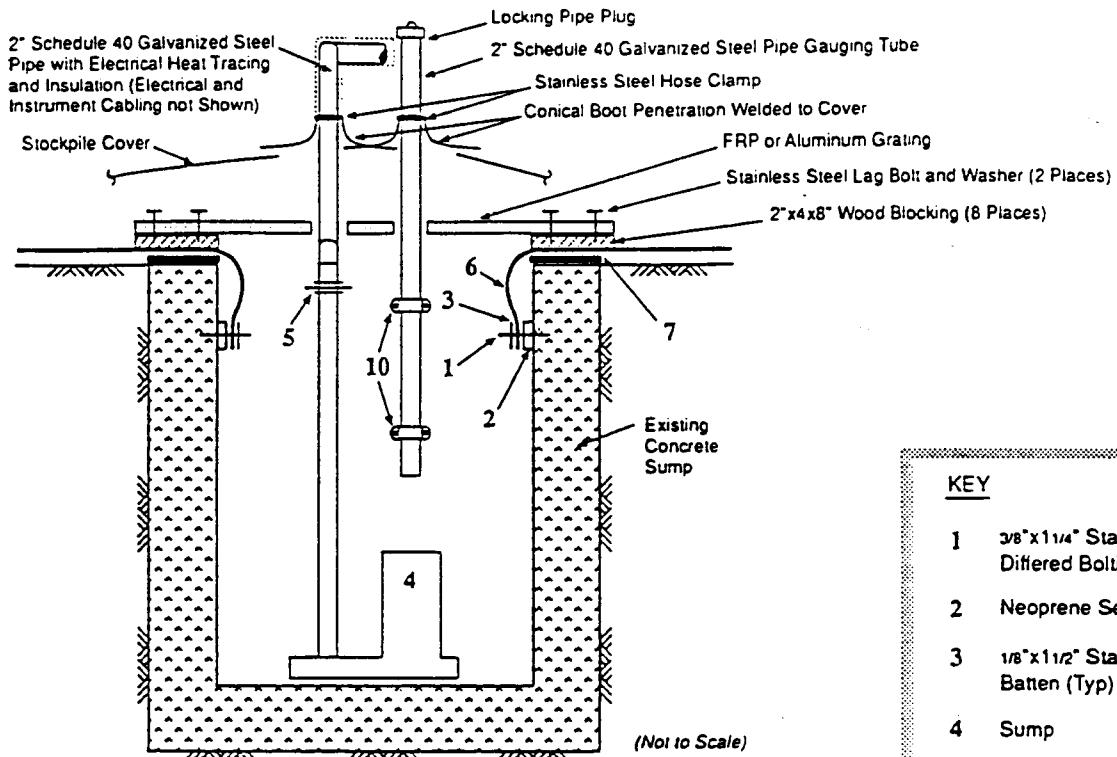
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Scale in Feet

**A**

Stockpile Grading Plan

Figure 3

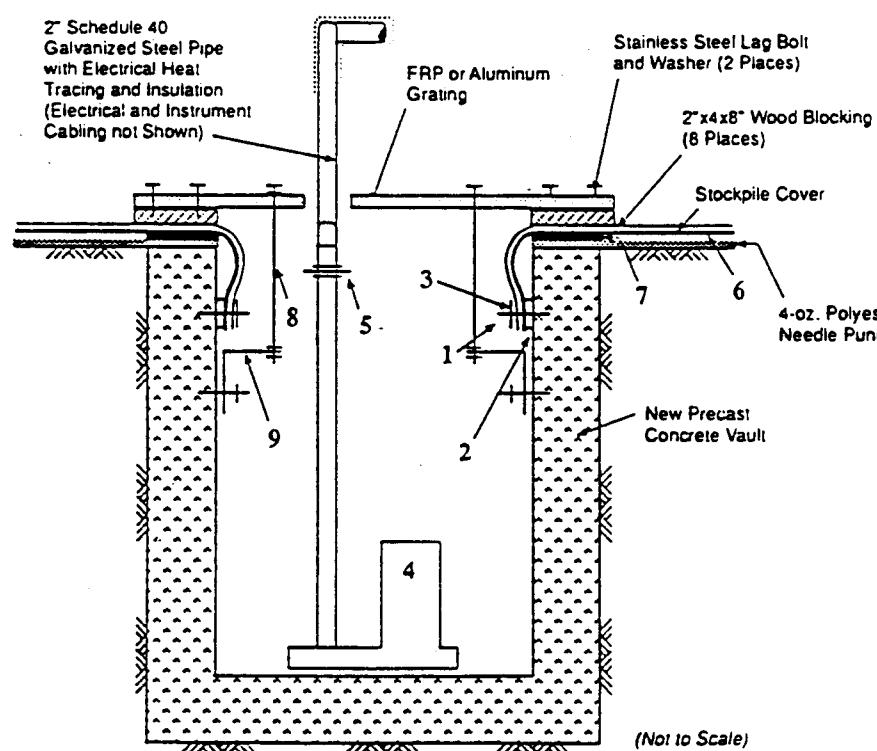
## LEACHATE COLLECTION SUMP



### KEY

- 1 3/8" x 1 1/4" Stainless Steel Differed Bolting Device
- 2 Neoprene Sealant Strip (Typ)
- 3 1/8" x 1 1/2" Stainless Steel Batten (Typ)
- 4 Sump
- 5 2"-Dia. Screwed Union (Typ)
- 6 Existing or New FML Liner; If New, Overlap Existing Liner and Seal; Vacuum Test Seams
- 7 1/2"-Thick Neoprene Rubber Cushion
- 8 1/2" Stainless Steel All-Thread with Nuts for Cover Hold Down (2 Places)
- 9 4" Angle Bracket FRP or Aluminum
- 10 Pipe Support Bracket

## STOCKPILE COVER STORMWATER COLLECTION SUMP



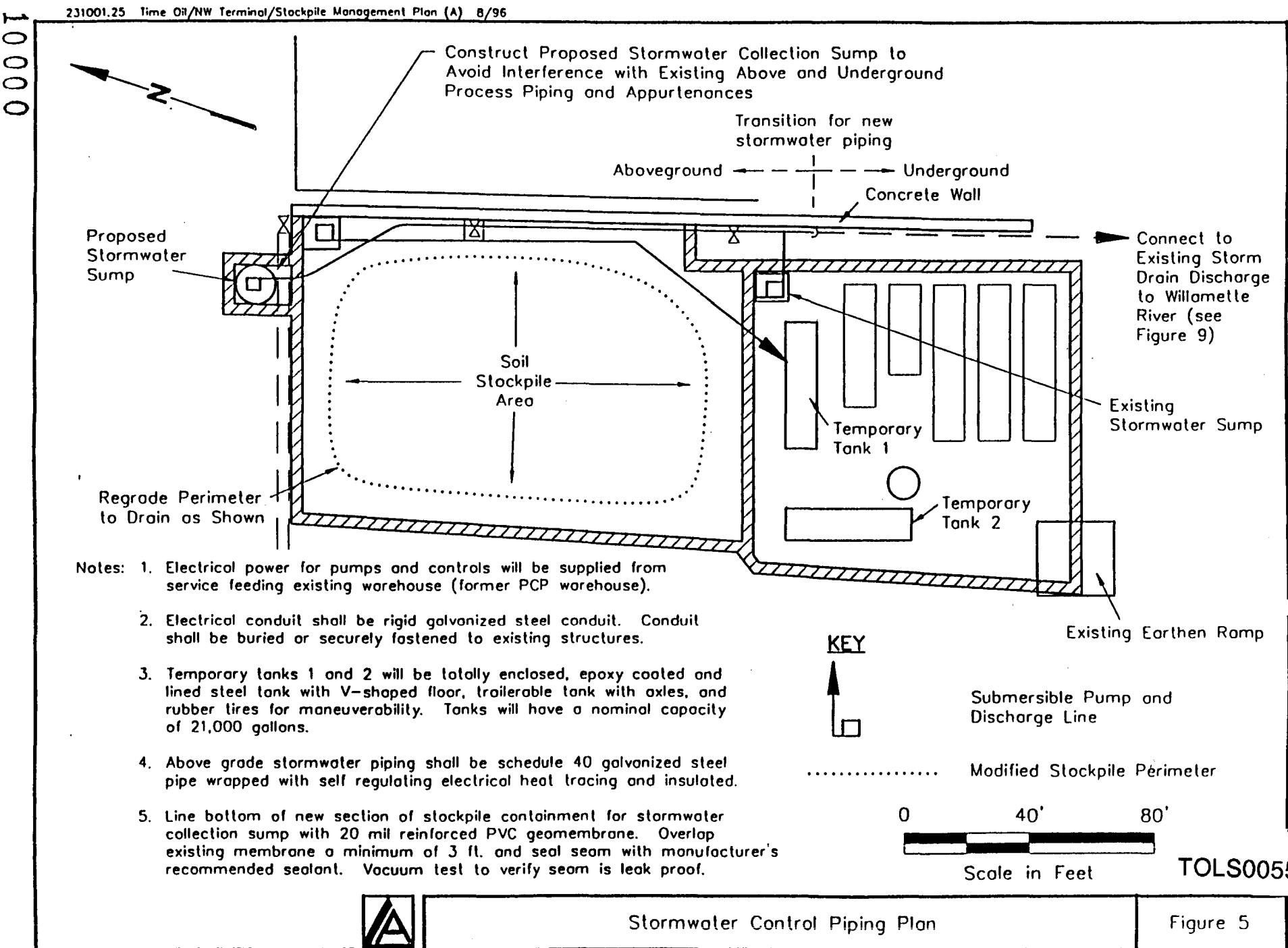
TOLS005541

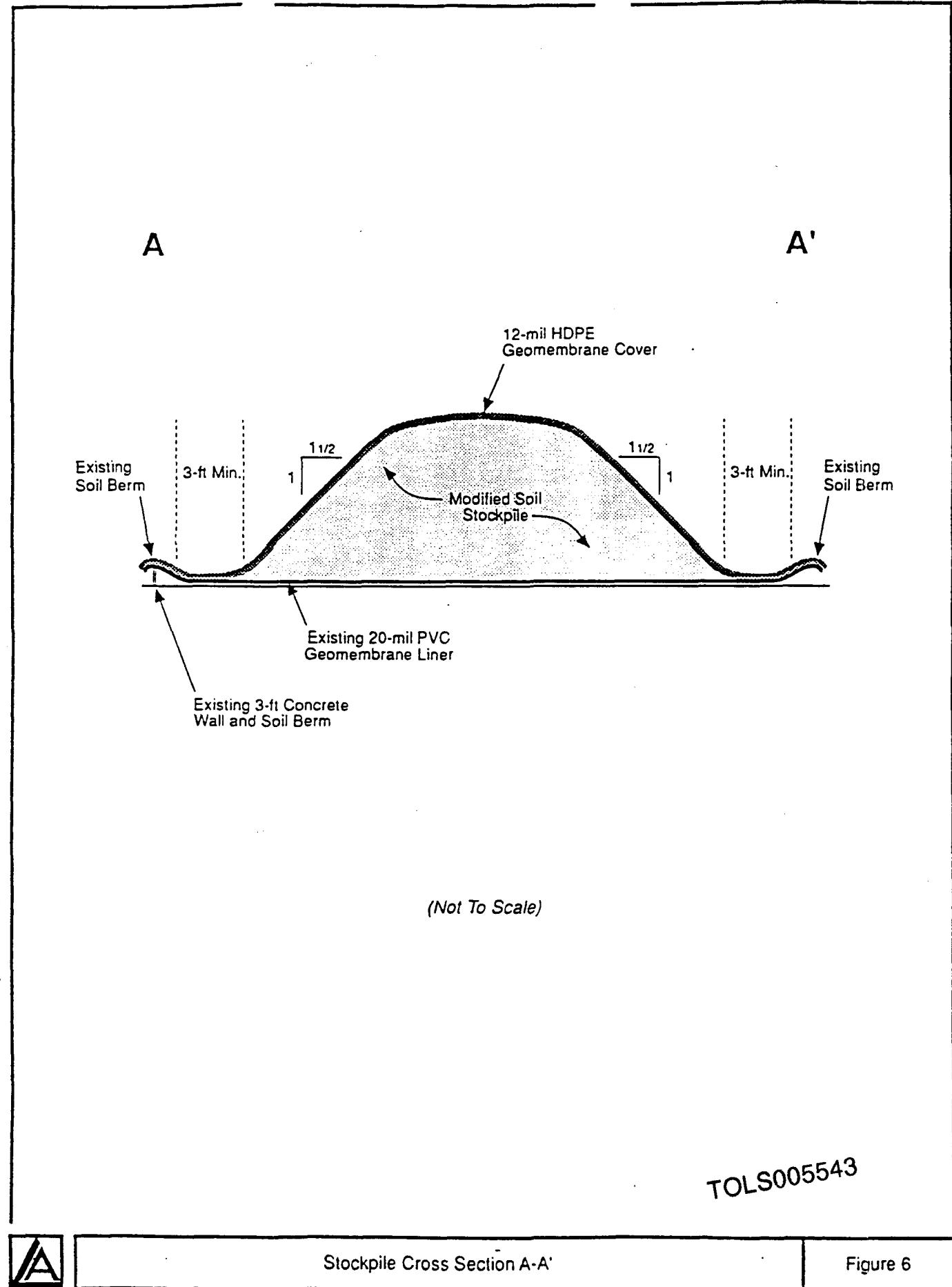
A

Stormwater Collection Sump Seal Details

Figure 4

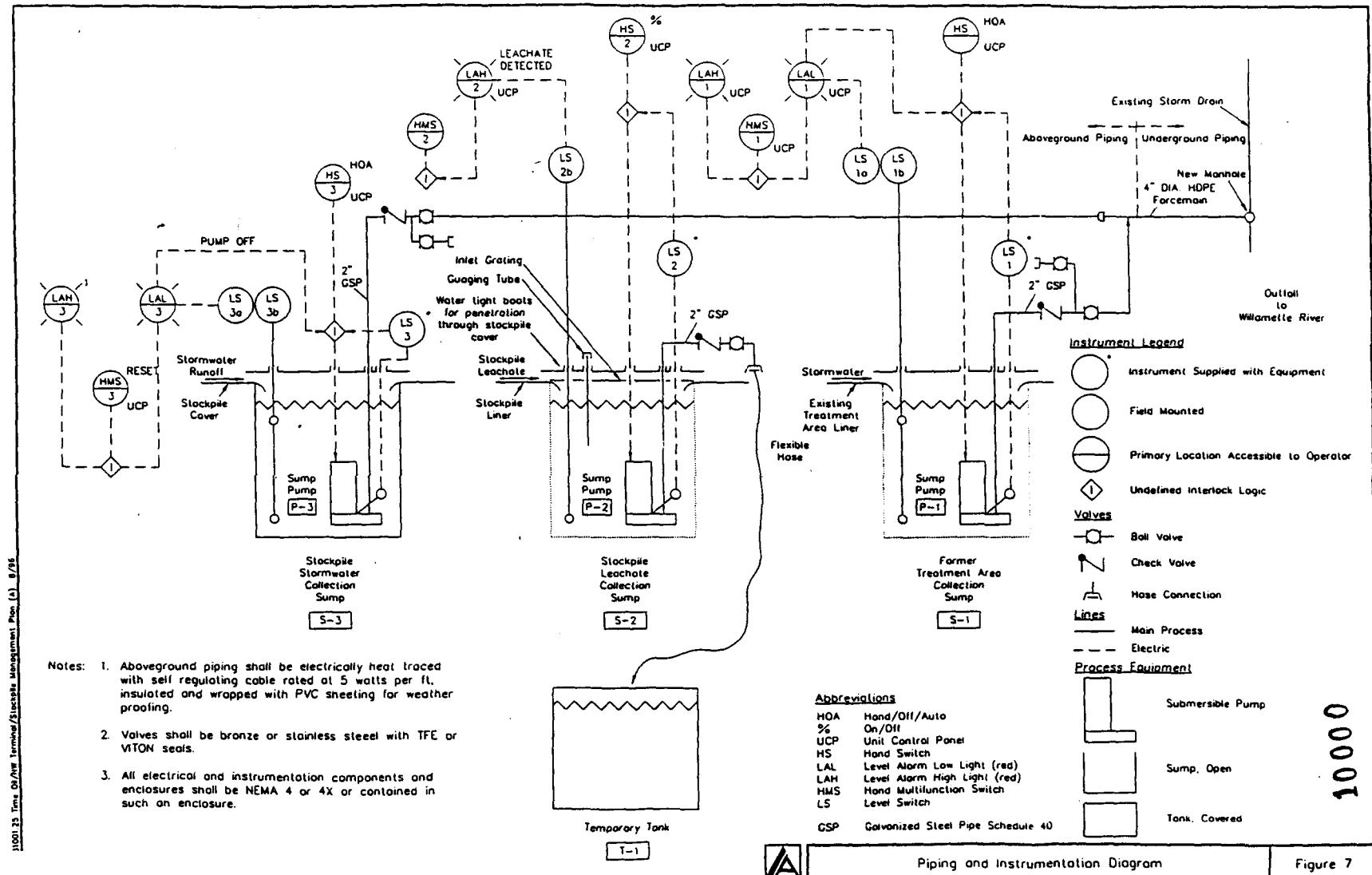
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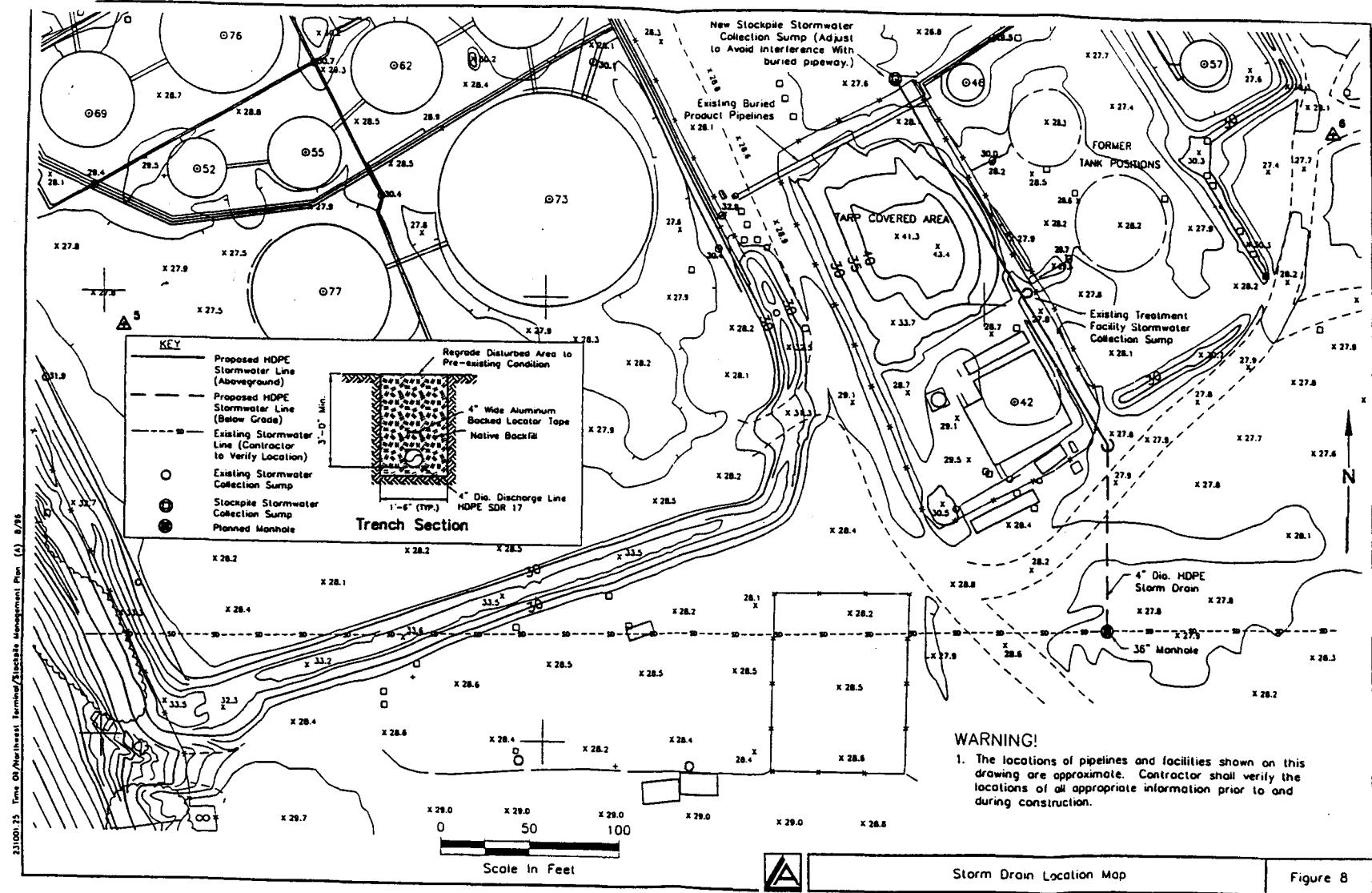




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## FORM 1

## WEEKLY STOCKPILE MANAGEMENT PLAN INSPECTION FORM

Inspector's Name:	Present weather condition	<input type="checkbox"/> Sunny <input type="checkbox"/> Partly Cloudy <input type="checkbox"/> Cloudy <input type="checkbox"/> Foggy <input type="checkbox"/> Rainy	Date: Time:	Date of last inspection: By:
Time since last rain?				
Is the cover fully covering the pile?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If No, reposition cover or provide additional cover materials as needed. Note affected area and document corrective action below.
Is there standing water on the cover?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If Yes, remove ponded water from cover and discharge per SMP. Note affected area and document corrective action below.
Is the cover anchorage system (field anchorages and anchor trench) secure?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If No, reposition and provide additional anchorage as necessary to maintain cover in place. Document corrective action below.
Are there any apparent rips or tears in the cover?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If Yes, repair tears immediately in accordance with manufacturer's recommendations. Note affected area and nature of damage and document corrective action taken.
Is the flow line inside the perimeter berm free of sediment and plant growth?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If No, remove plant growth and sediments to prevent obstruction of the flow path.
Are there indications of stormwater running on or ponding adjacent to the perimeter berm?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If Yes, implement appropriate corrective action as needed to prevent breaching. Note affected area and document corrective action.
Are there indications of stormwater running off the cover, outside of the perimeter berm?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If Yes, implement corrective action. Note affected area and document corrective action below.
Are sumps free of sediment?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If No, remove sediment and note corrective action below.
Are water level indicators and pumps operating properly?		<input type="checkbox"/> NO	<input type="checkbox"/> YES	If No, make appropriate repairs in accordance with manufacturer's recommendations. Note corrective action below.

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**FORM 1**

## WEEKLY STOCKPILE MANAGEMENT PLAN INSPECTION FORM

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TABLE 1  
SUMMARY OF NOVEMBER 22, 1995 STORMWATER SAMPLING EVENT

Detected Analyte	Method	Stormwater on Pile Cover Result	Stormwater from Former Treatment Area Sump Result
pH	EPA 150.1	6.7	6.6
Total organic carbon	EPA 415.1	1.7 mg/L	2.1 mg/L
Zinc	EPA 200.7	0.011 mg/L	0.007 mg/L

Notes:

1. Samples were analyzed for pH, total organic carbon, priority pollutant metals (EPA methods 200.7 and 245.1), volatile organics (EPA method 624), semivolatile organics (EPA method 625), phenols (EPA method 8040), pesticides/PCBs (EPA method 608), and total petroleum hydrocarbons (EPA method 418.1).
2. Detected concentrations of zinc may be attributable to atmospheric deposition of dusts during antecedent dry periods or leaching from old automotive tires used to anchor stockpile cover.

ATTACHMENT 2

## **Drum Removal and Small Stockpile Relocation Scope of Work**

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## CONTRACTOR SCOPE OF WORK

This scope of work provides a description of activities to be conducted by the contractor as part of a drum removal and small stockpile relocation at the Time Oil Northwest Terminal (the site) in the Rivergate area, Portland, Oregon. The contractor must provide all labor, equipment, and supplies necessary to perform the services described below.

### DRUM REMOVAL

Twenty-seven drums have been observed in an undeveloped area of the site. The drums are located in and near two small surface depressions (referred to as the north and south drum areas) within a crescent-shaped area of about 100 ft by 30 ft at the base of a crescent-shaped topographic rise. In April 1996 each drum area was observed to contain an estimated 2,000 to 3,000 gallons of standing surface water. At least 10 drums were completely submerged in standing water at that time, and others were partly submerged. Also, some of the drums are partly buried in soil. The condition of the drums varies from minimal corrosion with some holes to almost completely corroded; some drums were partially crushed. It is unknown whether additional drums are buried in these areas. The topography surrounding the drum areas and the hill is primarily flat, but some small debris piles exist near the drums. Vegetation in the area consists mainly of grasses, scrub brush, and blackberry vines.

Residuals (solids and water) were observed in some of the drums during a recent field reconnaissance. Samples of these residuals were collected and analyzed for various organic constituents and metals. The sample results indicate that pentachlorophenol (PCP) was detected at concentrations ranging from nondetect to 47 percent in residual solids collected from the drums, but was less than 1 part per million (ppm) in water sampled from the drums and from the standing water. Residuals from two of the drums contained elevated concentrations of metals (including lead, 4 to 19 percent; chromium, 150 to 50,000 ppm; arsenic, 70 to 150 ppm; thallium, 50 to 140 ppm; zinc, 50 to 4,200 ppm; and mercury, from less than 1 to 220 ppm) and total petroleum hydrocarbons (TPH) (undetected to 15 percent). Some of the drum water also contained elevated concentrations of metals (including lead, 0.01 to 12 ppm and chromium, 0.1 to 2 ppm), low to moderate concentrations of solvents (less than 1 to 4 ppm per detected constituent), and TPH (up to 360 ppm). A white, waxy substance also was observed during the field reconnaissance in three isolated areas adjacent to the south drum area. This substance was determined to be essentially 100 percent PCP.

The objective of the drum removal is to remove the drums and waxy substance (and obviously affected soil) from the undeveloped area, prepare the drums and hazardous substances for transport to the appropriate disposal facility in accordance with appropriate state and federal laws and regulations, and confirm effectiveness of the removal activities. It is anticipated that the field activities for the drum removal will take approximately 3 days. The drum removal may occur during the same week as the small soil stockpile relocation (see below). The contractor shall conduct the following tasks for removal and disposal of the drums. In the conduct of these tasks, contractor will consolidate waste materials subject to disposal as RCRA F027 hazardous waste so as to minimize the number of containers requiring storage, transport, and disposal.

#### TASK 1. DECONTAMINATION AREA PREPARATION

The contractor shall establish a temporary decontamination area for use during drum inspection, sampling, decontamination, overpacking, equipment cleaning and other activities related to drum disposal. Because the decontamination area also will be used for work related to the nearby small stockpile relocation (described below), the contractor shall locate it in an area convenient to both the drum removal and small stockpile relocation areas. Location of the temporary decontamination area is tentatively planned to be slightly west of the small soil stockpile where confirmation sampling will likely occur following removal of the decontamination area. The contractor shall prepare the decontamination area by performing the following activities:

- Upon arrival at the site, inspect existing site conditions to determine if the specified decontamination area location is appropriate for planned activities. The decontamination area shall be large enough to allow for simultaneous drum inspection, sampling, overpacking, and decontamination, if needed, and provide for decontamination of equipment used to remove and handle drums and debris. As directed by Time Oil, part of the decontamination area may be used for temporary drum storage after decontamination is complete.
- Construct a bermed decontamination pad using an appropriate synthetic liner that will withstand various decontamination activities without tearing and leaking and a sump to allow the collection of decontamination fluid and solid residuals. Construction of the pad includes appropriate subbase preparation using suitable onsite granular material or imported (by contractor) granular fill, and use of curtains or other barriers, as appropriate, to contain decontamination sprays. Alternative decontamination pad design may be approved by Time Oil.
- Provide a hot water pressure washer, water supply tank, and accessories for conducting decontamination activities. Water is available within  $\frac{1}{3}$  mile but not at the drum area.

- Provide pumps, vacuum truck, and other equipment necessary to collect, store, and/or transport decontamination fluids and solid residuals. Clean, 55-gallon drums will be supplied by Time Oil.

## TASK 2. DRUM AREA PREPARATION

As noted previously, some of the drums are submerged or partly submerged in standing water. The contractor shall remove the standing water before removing the drums. The contractor shall prepare the drum area before removal activities by conducting the following activities:

- Pump any standing water from the south (and possibly the north) drum areas using a vacuum truck (with a capacity of approximately 4,000 gallons) and transport the water to tank 38009 located adjacent to the former PCP mixing area (or an equivalent tank, as directed by Time Oil). The contractor shall arrange for rental and delivery of the vacuum truck prior to mobilizing to the site. The rate of seepage is uncertain, so the contractor shall maintain operation of the vacuum truck to keep the water level lowered while removing the drums and searching the area for additional drums. The contractor shall take appropriate measures to minimize the amount of sediment that is pumped with the water.
- Cut brush in the drum area and set aside to minimize hazards and to facilitate the search for additional (including buried) drums.

## TASK 3. DRUM AND RESIDUAL REMOVAL

The contractor shall perform the following activities in support of the drum removal and residual collection:

- Remove drums and transport them to the decontamination area. The contractor shall have available a variety of slings, cradles, or other types of devices to remove and transport the drums without spilling the contents and drum dolly or backhoe to transport drums that contain water. The contractor also shall have available temporary plugs for small holes to stop small leaks while handling, and oversized liners to contain leakage from the drums during transport between the drum removal area and the decontamination pad. (If it is necessary to dehead or overpack drums before moving, the contractor shall provide the necessary means to prevent contamination to the ground surface in the area where this activity occurs.) Heavy equipment shall not track or spill any contaminated material during transport onto other areas.
- Assist Time Oil and its consultant in searching the immediate area for additional buried drums, using a metal detector combined with hand shoveling and backhoe excavation. Provide the metal detector and appropriate hand tools to facilitate the drum search.
- Collect white, waxy solid residual from the ground surface in three isolated areas, and place it into containers appropriate for storage, transport, and disposal of a RCRA F027 waste. At Time Oil's direction, some of the underlying soil also may be removed from

these and other areas and placed into 55-gallon drums for transport to the large soil stockpile. The volume of identified, white, waxy solid on the surface is estimated to be about 7 ft<sup>3</sup> or less.

- Assist with confirmation soil sampling to be conducted by Time Oil and its consultants, as directed by Time Oil, potentially including digging of shallow test pits in the drum area with the backhoe.

#### TASK 4. DRUM DECONTAMINATION AND OVERPACKING

Most of the drums appear to be empty or filled with water and soil or sediment. Based on the field reconnaissance analytical results, at least some of the drums likely contained wood-treatment products, including PCP and one contained thick, oily sludge. It is anticipated that some of the drums can be recycled; the appropriate decontamination procedure for such drums will be a triple rinse, using a hot pressure wash and detergent, if necessary, to clean oily surfaces and that the cleaned drums will be disposed at a local recycling facility. Those drums that cannot be recycled, and other metal, plastic, rubber, or glass debris will be handled as hazardous debris and, whenever possible, treated per the requirements of 40 CFR 261.3(f) and 268.45 to allow disposal of the treated debris as solid waste. This will involve physical extraction via high pressure steam and water sprays and/or scrubbing to remove hazardous contaminants from the debris surfaces. Drums and other debris treated to the requirements specified in 40 CFR 261.3(f) and 268.45 (verification of adequate treatment will be made by Time Oil) will be subsequently managed as solid waste. Debris that is not metal, plastic, rubber, or glass (e.g., wood, brick, etc.) will be segregated and either pressure washed and tested to determine whether it can be classified as a nonhazardous waste, or disposed of as a F027 waste.

A limited number of drums may need to be overpacked for disposal. To accomplish this task, the contractor shall:

- Dehead drums, remove any remaining contents (may require scraping), and place the contents into drum overpacks or other containers appropriate for storing, transporting, and disposing a RCRA F027 waste. If any of the drums contain residuals (solids or liquids) that require additional characterization, transfer this material into separate, clean, 55-gallon drums or into DOT-approved drum overpacks for sampling and offsite disposal. Use sorbents as necessary to prevent free liquids.
- Rinse the emptied, recyclable drums using a hot pressure washer and detergent if necessary to clean oily surfaces, to remove contents, scale, and residual solids. Move the decontaminated drums to a temporary lined storage area, as directed by Time Oil. Secure and cover the decontaminated drums and transport them to the appropriate drum recycling facility.

- Overpack any full or partially full drums containing solid PCP, or other known or suspected hazardous materials (as directed by Time Oil). Move the overpacks and drums containing residuals to Time Oil's existing covered storage area, in the former PCP warehouse, until the appropriate disposal option is determined.
- Decontaminate nonrecyclable drums and other metal, plastic, rubber, or glass debris using a high pressure steam or water spray (with detergent as needed to clean oily surfaces), and scrubbing, as appropriate, to produce a surface free of all visible contaminated soil and hazardous waste (per 40 CFR 268.45). Flatten the decontaminated debris to the extent possible, and place in containers appropriate for the storage and disposal as solid waste. Upon approval by Time Oil, transfer the containers to the appropriate disposal facility.
- Transfer decontamination fluids to existing tank 38009. Collect solid residuals from the decontamination area into a lined 55-gallon drum for transfer to the large soil stockpile, or into containers appropriate for the storage, transport, and disposal of a RCRA F027 hazardous waste, as directed by Time Oil. Label all containers as appropriate for their contents and transport the containers to a temporary, lined staging area (to be determined by Time Oil) or to the covered storage area in the former PCP warehouse, or to the large soil stockpile, as directed by Time Oil.

#### TASK 5. DEMOBILIZATION

The contractor shall remove and place the decontamination area liner and other waste materials into 55-gallon drums or other appropriate waste containers when the work is completed or as instructed by Time Oil. Contractor-owned equipment and debris, trash, or other material generated by the contractor, Time Oil, and its consultants shall be removed from the site at the completion of work. Contractor shall be responsible for proper disposal of these materials.

#### SMALL STOCKPILE RELOCATION

A small stockpile is located southeast of the south drum area. The stockpile is approximately 25 ft by 25 ft by 5 ft in size (about 50 yd<sup>3</sup> in volume) and is covered with a tarp and enclosed within a temporary fence. The small stockpile is located in an area reportedly used in the past for the accumulation of debris. Discarded bags originally containing PCP pellets (or prills) are included with the stockpile material. Wood, metal, and other debris also are included with the stockpile material; some of the debris has been burnt.

Analytical results for soil samples collected from the small stockpile during the field reconnaissance confirmed the presence of PCP (from 200 to 800 ppm), polycyclic aromatic hydrocarbons

(less than 1 to 250 ppm for individual constituents), TPH (100 ppm as oil to 900 ppm as diesel), and metals (including lead, 150 to 780 ppm; copper, 34 to 91 ppm; chromium, 22 to 37 ppm).

The objective of this task is to consolidate soil from the small stockpile with a large soil stockpile located about  $\frac{1}{3}$  mile to the southwest. It is anticipated that the field activities for the small stockpile relocation will take no more than 3 days; these activities may be conducted during the same week as the drum removal. The contractor will conduct the following tasks for relocation of the small stockpile. In the conduct of these tasks, contractor will consolidate waste materials subject to disposal as RCRA F027 hazardous waste so as to minimize the number of containers requiring storage, transport, and disposal.

#### TASK 1. SMALL STOCKPILE PREPARATION

The small soil stockpile contains miscellaneous debris, including bags that once contained PCP, mixed with a silty sand. Before relocating the small stockpile materials, the contractor shall segregate bags and debris (material >60 mm in size) from the soil to the extent possible. To accomplish the small stockpile preparation, the contractor shall conduct the following:

- Prepare a temporary area for screening debris from the soil in the small stockpile; the area shall be constructed to prevent the spread of any contaminated material. Locate the temporary area in a known contaminated area where soil excavation or confirmation sampling will occur, or protect the ground surface so that contamination from the small stockpile materials will not be transferred to uncontaminated soil.
- Set up a grizzly or similar screening unit, with a 0.5- to 1-inch screen in the temporary screening area.
- Remove the temporary chain link fence surrounding the small stockpile as needed to provide access, and cut the brush around the edges of the pile and set aside.
- Remove degraded tarps covering the pile, decontaminate the tarps, if possible, otherwise remove as much soil as possible from the tarps, and bundle tightly. Place the bundle in 55-gallon drums or appropriate containers for disposal, or manage as otherwise directed by Time Oil.
- Re-cover the pile with the existing temporary cover and the screened material with a new temporary cover at night and during adverse weather conditions to prevent transport of material by wind or precipitation. The existing cover dimensions are 24 ft by 36 ft.

## TASK 2. SOIL SORTING AND SCREENING

To remove the larger debris from the small stockpile and segregate the material containing PCP pellets and bags, the pile will be hand sorted and then mechanically screened. To accomplish this task, the contractor shall conduct the following:

- Remove solid PCP (e.g., pellets or prills) from the stockpile, to the extent practicable, by sorting through the pile using hand tools. Discard the solid PCP, PCP bags, and soil that could not be separated from the solid PCP into drum overpacks or other containers appropriate for storage, transport, and disposal of a RCRA F027 hazardous waste. The amount of PCP material that will result from this sorting is unknown but is estimated to be at least 1 yd<sup>3</sup> (4 or 5 drums).
- Screen out other debris, such as rocks, wood, metal, and trash from the soil first by using hand tools, followed by screening with a 0.5- to 1-inch grizzly, or similar equipment, for separate disposal. If the soil is too difficult to screen to this size, Time Oil may instruct the contractor to install a coarser-sized screen (e.g., 1.5-inch). Segregate gravel from debris of nongeologic origin to the extent possible. Provide appropriate measures to control the generation of air-borne dust.
- Decontaminate metal, plastic, rubber, and glass debris using a using a high pressure steam or water washer (with detergent as needed to clean oil surfaces) at the established decontamination area to produce a surface free of all visible contaminated soil and hazardous waste (per 40 CFR 268.45). Flatten the decontaminated debris to the extent possible, and place in containers appropriate for the storage and disposal of solid waste. Upon approval by Time Oil, transfer the containers to the appropriate disposal facility, or place the decontaminated debris into a temporary staging area, as directed by Time Oil, for eventual disposal as a solid waste. Transfer the decontamination rinse water to existing tank 38009. Collect solid residuals from the decontamination area into lined, 55-gallon drums for transfer to the large soil stockpile or into drum overpacks or other containers appropriate for storage, transport, and disposal of a RCRA F027 hazardous waste, as directed by Time Oil. For other debris (i.e., wood, brick, etc.), rinse using a high pressure steam or water washer for subsequent sampling, or place the debris into drum overpacks or other containers appropriate for storage, transport, and disposal as a RCRA F027 hazardous waste, as directed by Time Oil.
- Transport overpacks and other containers holding solid PCP and debris that cannot be decontaminated to Time Oil's existing covered storage area for temporary storage. Decontaminated debris shall be placed in appropriate containers and placed in the temporary staging area. Secure and cover the container(s) as instructed by Time Oil.

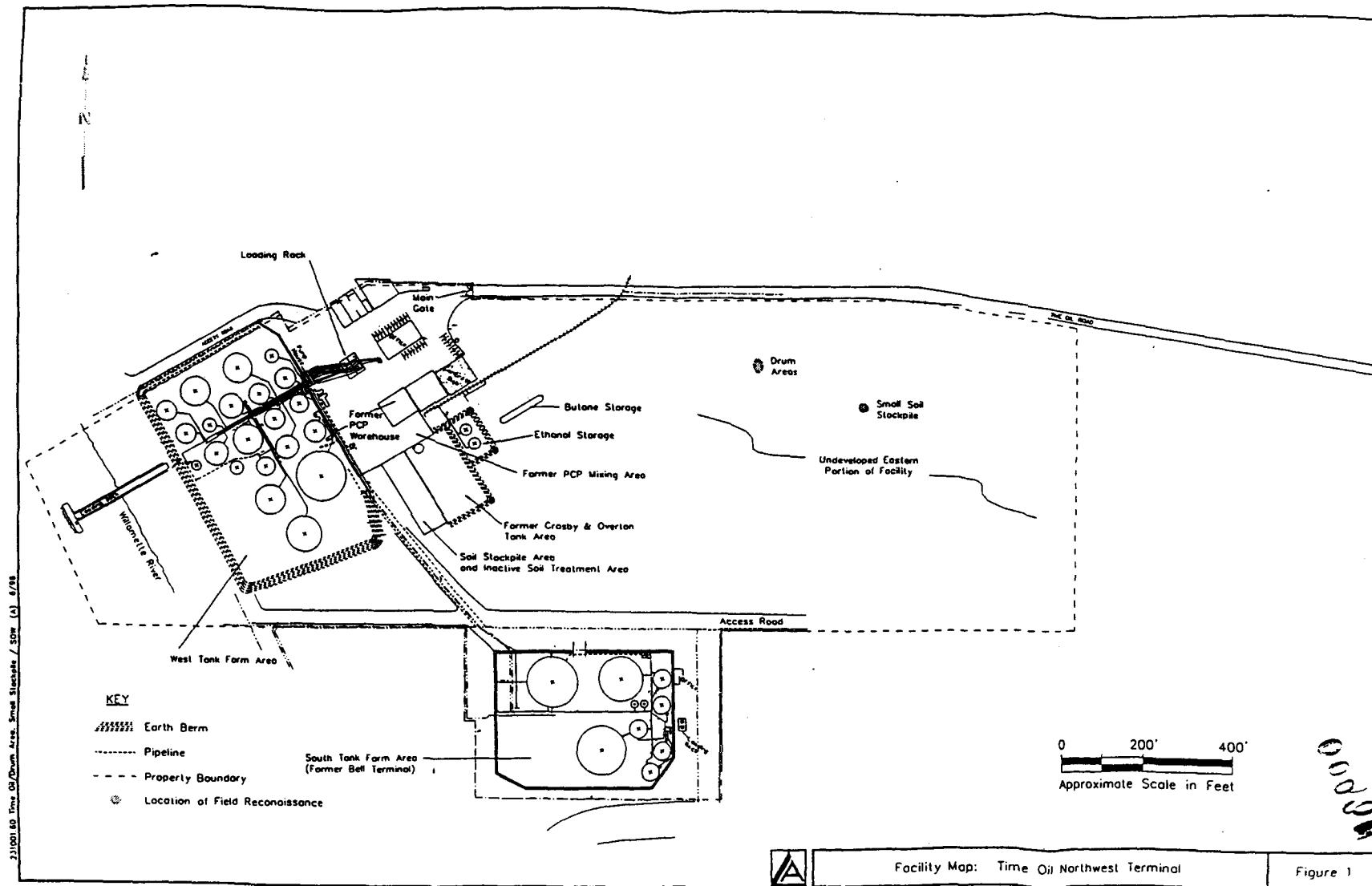
### TASK 3. SOIL RELOCATION

After the debris from the small stockpile has been segregated, the contractor shall transport the screened soil over contiguous Time Oil-owned property and add it to the large stockpile. To accomplish this, the contractor shall conduct the following:

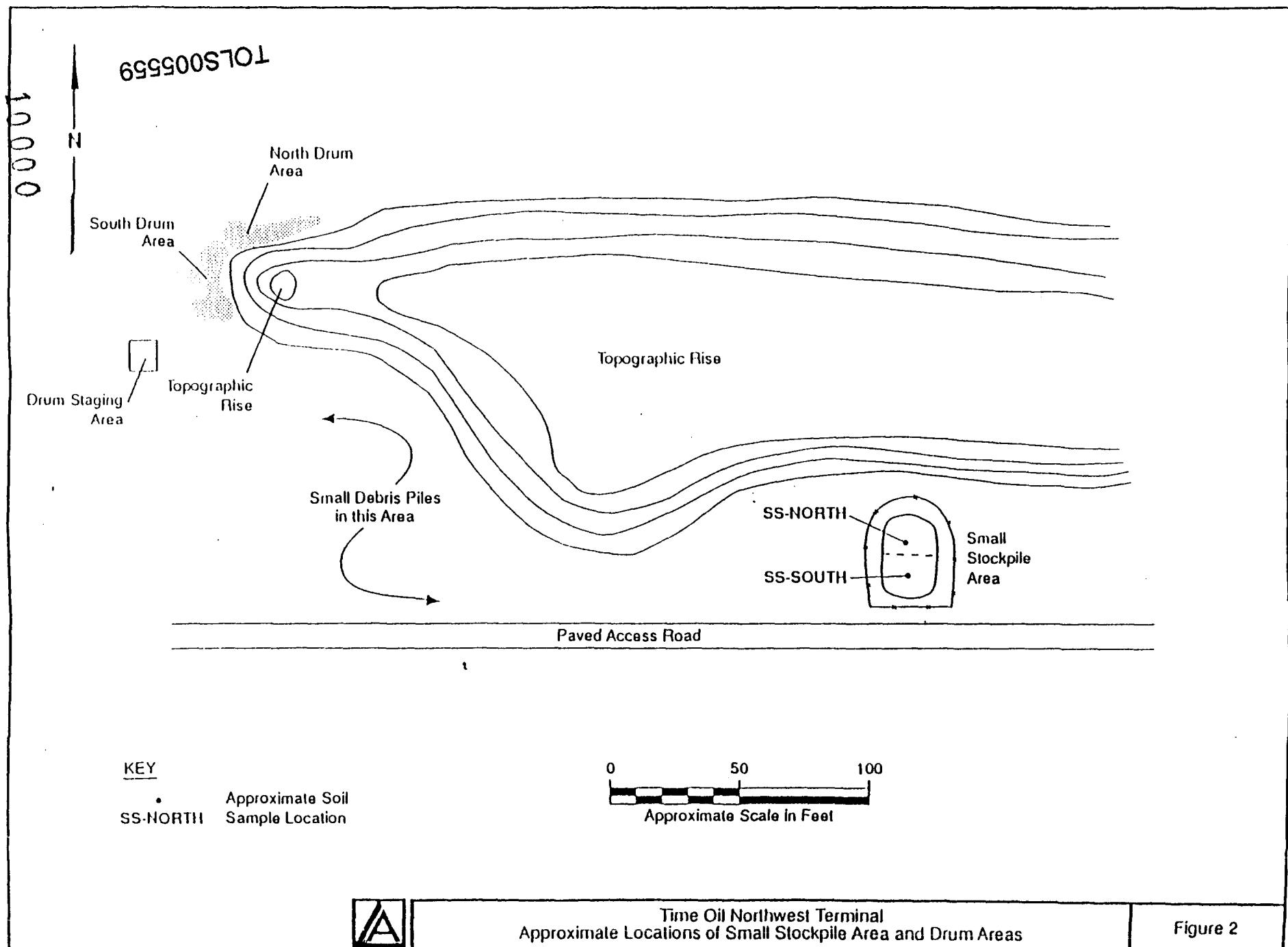
- Remove the cover (12 mil fabric-reinforced HPDE) from part of the large soil stockpile and remove part of the chain link fence to provide access, as directed by Time Oil.
- Transport the soil and any segregated gravel and decontamination solids to the large stockpile area (but segregate from the large stockpile using a polyplastic cover, if necessary), in consultation with Time Oil. To minimize the spilling of soil in transit, cover the soil with plastic during the relocation activities.
- Re-cover the large stockpile and replace the chain link fence.
- Decontaminate any potentially contaminated equipment at the decontamination area using the high pressure washer. Transfer decontamination fluids to existing tank 38009. Collect solid residuals from the decontamination area into containers for transport and consolidation with the large stockpile or into containers appropriate for the storage, transport, and disposal of a RCRA F027 hazardous waste. Transport the drums to a temporary lined staging area or to covered storage area in the former PCP warehouse.
- Assist with any confirmation soil sampling conducted by Time Oil and its consultant, potentially including digging shallow test pits in the small stockpile area with a backhoe.

### HEALTH AND SAFETY PLAN

The contractor shall prepare a project-specific health and safety plan, or the contractor may elect to adopt the health and safety plan of Time Oil's consultant (Landau Associates). The Landau Associates health and safety plan will be made available to the contractor for reference when the contract is awarded. The contractor's health and safety plan should provide information on safety rules and procedures (including personnel decontamination protocols), requirements for personal safety equipment, site monitoring and action levels, and emergency response. The contractor shall be responsible for providing their own personal protective equipment (PPE) and that of Time Oil and its consultant and properly disposing of it upon project completion. The contractor also shall provide all personal decontamination supplies, including provisions for boot wash and all other supplies required by the contractor's health and safety plan (e.g., health and safety monitoring equipment).



TOLS005558



ATTACHMENT 3

## **Contract Terms and Conditions**

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BZTO104(e)042381

## ENVIRONMENTAL SERVICES CONTRACT

THIS CONTRACT is made as of \_\_\_\_\_ at Seattle, Washington, by and between Time Oil Co., a Washington corporation ("Time" herein), located at 2737 West Commodore Way, Seattle, Washington 98199, and \_\_\_\_\_ ("Contractor" herein), located at \_\_\_\_\_ or construction and services related to the management of contaminated soils and debris at Time Oil Co. property no. 03-123, 10350 North Time Oil Road, Portland, Oregon.

IT IS AGREED by and between the parties hereto as follows:

1. **WORK TO BE PERFORMED:** The Contractor hereby agrees to perform services in accordance with the following attachments by reference made a part hereof, whether or not attached:

- Attachment 1: Request for Proposal and accompanying attachments (1 through 5) dated August 2, 1996.

Attachment 2: Contractors proposal dated \_\_\_\_\_

Contractor agrees that the Scope of Work sufficiently defines the work to be accomplished and that work can be successfully executed in accordance therewith. Time may make any alterations, deviations, additions or omissions from the aforesaid Scope of Work without affecting or making void this contract, however, no work other than as provided herein or specifically authorized by Time in writing shall become a part of this contract. Any change to the Scope of Work may only be made by written change order or other writing executed by both parties hereto.

2. **PRICE:** Time agrees to pay Contractor on a time and materials basis a sum not to exceed dollars (\$ ,000.00), which amount shall be referred to herein as the "contract price". Unit costs shall be in accordance with Contractor's proposal dated \_\_\_\_\_ (attachment 2). Any change to the contract price may only be made by written change order or other writing executed by both parties hereto. Any work performed which is not covered by a written change order shall be considered fully paid for upon payment of the contract price.
3. **TIME FOR PERFORMANCE:** All work shall be completed within 45 days from the date of notice to proceed, in accordance with the schedule contained in the Scope of Work. The time reasonably required to obtain permit approvals by government agencies shall not be counted against Contractor's performance provided that complete permit applications are submitted to the appropriate agencies in a timely manner. Contractor acknowledges that time is of the essence of this contract. The parties agree that Time's damages from Contractor's failure timely to complete performance may be difficult to calculate with certainty. Contractor agrees that \$250.00 for each day that Contractor is in breach of this provision is a reasonable estimate of such damages and agrees that Time may offset that amount as liquidated damages from payments due Contractor.
4. **TERMS OF PAYMENT:** Progress billings are to be made after each monthly period of this contract for work completed as of that date. Each billing shall be accompanied by a progress report describing work accomplished during the billing period and providing a detailed accounting of all costs incurred. Time will pay such billings less, at Time's option, ten percent retainage. Final payment, including all amounts retained, is to be made within 30 days of Time's receipt of final billing following Time's acceptance of the work described under the Scope of Work. Equipment purchased under this contract shall become the property of Time. Such purchases, including sales tax, shall be identified separately on Contractor's billings.
5. **TERMINATION OR SUSPENSION:** Time may, at any time, terminate or suspend all or a portion of the services remaining to be performed under the Scope of Work by giving Contractor advance written notice. In the

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Environmental Services Contract

event of any such termination or suspension, Time will pay Contractor for all services performed prior to Contractor's receipt of notice, services performed in accordance with Time's instructions after receipt of notice and such work as may be mutually agreed to be necessary to effect an orderly termination or suspension.

6. **INSURANCE:** Until completion of its performance hereunder, Contractor agrees to maintain Workmen's Compensation Insurance in the form and amounts required by state law, and Broad Form Comprehensive Public Liability with minimum limits of \$1,000,000 per person and \$1,000,000 per accident for bodily injury and \$500,000 per accident for property damage. Contractor shall promptly deliver to Time certificates of said insurance naming Time as an additional insured before commencing work and such certificates shall provide that said insurance shall not be canceled prior to thirty (30) days written notice to Time.
7. **PERMITS:** Contractor agrees to obtain, as part of the Scope of Work, all governmental permits, licenses and approvals now required, and to comply with all laws, rules, zoning ordinances, regulations and requirements, now or hereafter existing, of all governmental authorities concerned therewith, applicable to the Scope of Work. Contractor shall furnish Time with written evidence of all such necessary permits, licenses and approvals before ordering any material or equipment to be delivered to the above location, or before otherwise commencing work on this installation. Time shall have the right to withhold from any payments due hereunder an amount sufficient to compensate it for any damages it may incur as a result of Contractor's failure to secure any necessary permit or comply with any law or regulation.
8. **ASSIGNMENT:** Contractor shall not assign or transfer this contract, or any interest therein or any part thereof, without the consent in writing of Time.
9. **QUALITY OF PROFESSIONAL SERVICES:** Contractor shall be responsible for the professional quality, technical accuracy, and the coordination of all services furnished by the Contractor under this contract. All services provided by the Contractor shall be performed by employees or agents of the Contractor in accordance with the standards of workmanship and competency of their professions. The contractor shall, without additional compensation, correct or revise any errors or deficiencies in its performed services for a period of one year after completion. No payment made under this contract shall be construed to be an acceptance of defective work or improper materials. Contractor acknowledges that it is familiar with the work site and Scope of Work and is competent to perform the work described within the time stated herein.
10. **CONFIDENTIALITY:** The intermediate and final work products of this contract are for the exclusive use of Time. Contractor agrees not to release information obtained pursuant to this contract to any entity other than Time without Time's written permission, except where required by law or statute.
11. **CONDITION OF PREMISES:** Except as otherwise specified in the Scope of Work, Contractor shall, at all times, keep the subject premises free from accumulations of waste material (including, but not limited to, drill cuttings, purge or development water, excess construction materials and rubbish) caused by its employees or the work involved and, at the completion of work, shall remove all such waste material from and about the premises. In case of dispute, Time Oil Co. may remove such waste material and charge the cost to Contractor.
12. **LIENS:** Contractor covenants that no liens will attach against the subject premises for material or labor arising from the work herein contemplated. If at any time there shall be evidence of lien or claim for which, if established, Time may become liable, and which is chargeable to Contractor, Time shall have the right to retain out of any payment then due, or thereafter to become due, an amount sufficient to completely indemnify Time against such lien or claim, should there prove to be any such claim. Nothing herein restricts Contractor's right to place liens on subject premises when otherwise permitted by law.

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Environmental Services Contract

13. **INDEMNITY:** Contractor agrees to indemnify Time and hold Time harmless from any and all claims, liabilities, demands, actions, costs and expense (including attorneys' fees) of whatsoever nature, arising out of any acts or omissions of Contractor, its agents or employees, with the sole exception of those claims arising out of or resulting from the Contractor's professional services under this contract. Professional services shall mean only those intellectual services or creative work requiring engineering education, training, and experience and the application of special knowledge of the mathematical, physical, and engineering sciences to such intellectual services or creative work such as consultation, investigation, evaluation, planning, and design. Contractor shall indemnify Time and hold Time harmless from any and all claims, liabilities, demands, actions, costs and expense (including reasonable attorneys' fees) arising out of or resulting from the contractor's professional services under this contract to the extent the aforesaid claims arise out of or result from the negligent acts or omissions of the Contractor, its agents or employees. These indemnifications shall not apply to pre-existing contamination except to the extent that such contamination may be exacerbated by any acts or omissions of Contractor, its agents or employees.
14. **REMEDIES:** All rights and remedies of Time herein shall be cumulative, and no right or remedy shall be exclusive of any other, and the pursuit of any such right or remedy shall not be deemed a waiver of any other or different remedy or relief which Time might otherwise be entitled by law or in equity.
15. **FORCE MAJEURE:** Contractor shall not be held liable for delays resulting from fire, earthquakes, war or acts of any government, whether foreign or domestic, or any other cause beyond his control. However, Contractor has specifically taken into account and shall be held liable for potential delays caused by labor disturbances, material availability, and climate.
16. **INTERPRETATION:** This contract will be deemed executed and shall become binding and of full force and effect when signed by Time at its office by its authorized representative. This contract incorporates the entire agreement between the parties except as modified by written change order or other written agreement signed by both parties.
17. **APPLICABLE LAW:** The nature, validity and interpretation of this contract shall be governed by the laws of the State of Washington.

DATED \_\_\_\_\_

DATED \_\_\_\_\_

TIME OIL CO.  
BY \_\_\_\_\_

CONTRACTOR  
BY \_\_\_\_\_

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ATTACHMENT 4

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## **Landau Associates Health and Safety Plan**

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Health and Safety Plan

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**Time Oil Northwest Terminal Facility  
Portland, Oregon**

April 16, 1996  
Revised August 1, 1996

Prepared for

**Time Oil Co.  
2737 West Commodore Way  
Seattle, WA 98199-1233**

Prepared by



**TOLS005565**

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**LANDAU ASSOCIATES, INC.**

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BZTO104(e)042386

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## 1.0 INTRODUCTION

This health and safety plan presents the protocols that will be required to provide for worker health and safety during environmental activities to be conducted at Time Oil Co.'s (Time Oil) Northwest Terminal in Portland, Oregon. This plan presents a description of known existing site conditions and the project health and safety organization, and also includes safety rules and procedures; criteria for hazard and risk analysis; description of levels of personal protection and required equipment; air monitoring procedures; emergency response information; training requirements; and requirements for routine health care and health monitoring.

The requirements outlined in this plan are considered the minimum health and safety requirements due to potential site contamination. All fieldwork will be performed in accordance with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.120, which regulates hazardous waste site operations; as well as Oregon requirements outlined in the Oregon Administrative Rules (OAR 437). This plan does not address physical worker safety issues that may be associated with excavation, trenching, and shoring (OAR 437-03, Subdivision P) or work in confined spaces (OAR 437-02, Subdivision E).

### 1.1 SITE BACKGROUND

The Northwest Terminal facility is currently used for petroleum products handling and storage, and is bounded to the north, east, and south by heavy industrial complexes of Portland's Rivergate area and the Port of Portland, and to the west by the Willamette River. Within the facility, which covers approximately 52 acres, are several areas distinguished by their current and/or historical uses (Figure C-1). These include the following:

- Former pentachlorophenol mixing area where specialty wood treating products containing pentachlorophenol (PCP) in various formulations were blended and stored for offsite shipment. The former PCP mixing area is located in the approximate center of the facility, and includes the former PCP warehouse; the area south of the warehouse (formerly occupied by various mixing and storage tanks and currently empty); a stockpile of approximately 3,000 yd<sup>3</sup> of soil that was excavated from the area south of the warehouse in 1989 and placed on a liner and under a cover in an area adjacent to the southwest corner of the excavated area, and an inactive soil treatment area just south of the soil stockpile. Releases of PCP, carriers, additives, and the resultant formulations occurred to soil in the former mixing area, and those chemicals are suspected to exist today in the stockpiled soil, as well as in unexcavated soil in the former PCP mixing area. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.

- Former Crosby & Overton tank area, in which waste oils were stored in two aboveground storage tanks. The tanks have been removed from this area, which is adjacent to the south side of the former PCP mixing area. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.
- Active west bulk product tank farm area where various petroleum products are stored. This bulk product terminal area is located in the western portion of the facility, adjacent to the Willamette River. Gasoline, diesel, ethanol, and other petroleum products are stored in 21 aboveground storage tanks ranging from 5,000 to 80,000 gallons in size. In 1979 there was a documented spill of diesel within the tank farm, and in 1994, there was a spill of unleaded gasoline in the tank farm. Because it is an active tank farm, health and safety issues include not only chemical exposure and physical hazards, but explosive hazards as well. The Northwest Terminal tank farm is covered by this health and safety plan.
- Loading rack where petroleum products are transferred from the Northwest Terminal tank farm to trucks. The loading rack is located just west of the office. A spill of ethanol occurred in this area, and subsequent remedial actions included spill containment and recovery on the ground surface, and pumping and treating ethanol-affected groundwater from well M. No environmental investigations of the loading rack are planned; however, investigations relating to other areas of the facility may include intrusive activities in this area and, therefore, this health and safety plan addresses this area.
- Active south tank farm area (former Bell terminal) located in the southwestern portion of the facility. Petroleum products are stored in ten aboveground storage tanks and one underground storage tank. No environmental investigations are anticipated in this area; therefore, this area is not covered by this health and safety plan.
- Inactive and currently undeveloped eastern portion of the facility. Observations indicate that drums, some of which contained PCP or PCP formulations, and empty bags that originally contained solid PCP are mixed with soil in discrete areas of this portion of the facility. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.
- Entrance, office, and equipment maintenance area located in the northwestern portion of the facility. There are no environmental activities planned in this area; therefore, this health and safety plan does not cover this area.
- Butane and ethanol storage area and loading rack located to the southeast of the office area. No intrusive environmental activities are planned in this area; therefore, this area is not covered by this health and safety plan.

The purposes of the planned environmental activities are to collect sufficient data to characterize the nature and extent of contamination that remains at the site, to consolidate

contaminated material that may exist in the eastern portion of the facility with similar material in other areas, and to verify the removal of contaminated material in those areas where removal activities take place. Field investigations covered by this health and safety plan may include:

- Sampling and analyzing soil in and adjacent to areas previously reported to be contaminated with PCP and other carrier compounds, PCBs or TPH, or where previous site activities suggest the potential for such contamination
- Installing monitoring wells and sampling and analyzing groundwater in areas downgradient of previously identified soil or groundwater contamination and/or where previous hydrogeologic characterization is considered insufficient
- Abandoning existing wells which are damaged
- Overseeing removal and decontamination of drums and debris, and excavation of soil which may be contaminated with PCP and possibly associated carrier chemicals, TPH, and metals
- Measuring groundwater levels to evaluate flow directions and piezometric head gradients
- Conducting aquifer tests (slug and pumping) in selected monitoring wells to evaluate aquifer properties and potential contaminant migration pathways
- Modifications to existing stormwater controls, including installation of sumps and regrading of stockpiled soil.

This health and safety plan does not cover site activities that are limited to walking across any exclusion zone designated in this plan if the activities noted above are not in progress in that exclusion zone, and if the activities in progress in any other designated exclusion zone do not represent a reasonable risk of exposure.

PCP and petroleum-related chemicals are expected to be the most frequently encountered constituents of concern at the site. Table C-1 lists these and other potential constituents of concern, with their maximum previously detected concentrations (if known) and health-based exposure information. It should be noted that the symptoms listed as a result of exposure are generally associated with acute (short term) exposures to high concentrations of a constituent. Such symptoms may not be associated with the lower level exposure that would be the most likely exposure scenario encountered during site work. Lack of these symptoms does not indicate that exposure is not occurring. Also, symptoms of exposure are not available for some of the constituents. Therefore, use of prescribed protective equipment and monitoring instruments in

accordance with this plan is required in order for exposure to these constituents to be kept as low as possible.

## 1.2 HEALTH AND SAFETY PLAN APPLICABILITY AND ADHERENCE

All individuals present onsite in areas where environmental activities are being conducted must read, understand, and comply with this health and safety plan. All field participants must read the plan prior to undertaking field activities. If any information presented in this plan is unclear, the reader should contact the site safety officer for clarification prior to participating in any field activity. Once the information has been read and understood, the individual must sign the Acknowledgment (Table C-2), which will then be placed in the job file.

All subcontractors for Landau Associates must prepare their own health and safety plan that is at least as protective as this plan, or they may adopt this plan as their own. Failure to comply with the requirements of this plan are grounds for immediate work suspension/dismissal. Copies of an acknowledgment form similar to that provided as Table C-2 must be provided to Landau Associates' site health and safety officer before the commencement of field activities.

This plan is flexible, and allows unanticipated site-specific problems to be addressed. The plan may be modified at any time, based on the judgment of the respective site safety officer or the project safety officer, as follows:

- Minor changes to the plan with regard to day-to-day activities (e.g., location of decontamination station, etc.) may be made by the site safety officer
- Substantive changes to procedures (e.g., monitoring frequency, etc.) must receive the concurrence of both the site safety officer and the project safety officer.

Any modifications to the plan will be documented using Table C-3 (Modification to Health and Safety Plan) and will be presented to the onsite team during a safety briefing.

Activities conducted as part of this investigation shall be conducted without creating health and safety risks for nearby workers or the public. All onsite personnel shall be attentive to the potential for release of contaminated materials associated with field activities and shall immediately bring all such matters to the attention of the appropriate site safety officer. Decontamination procedures and other elements of the field procedures (e.g., access to/from work areas by heavy equipment) have been developed to be protective of both worker and public health and safety.

### **1.3 RESPONSIBLE INDIVIDUALS**

Safety during the field investigations will be the responsibility of the Landau Associates' project manager and the designated site safety officer. The site safety officer, or designee, will be present at the site at all times during field activities related to the investigation.

## 2.0 SITE ORGANIZATION AND OPERATION

The areas of the site to be investigated and the type of activities involved in the investigation are diverse. Additionally, the distribution of contamination at the site is nonuniform in nature. These factors preclude the use of a single work zone boundary.

Figure C-2 provides a general indication of the layout for each work area. However, actual boundaries may vary slightly with work activity requirements, and will be clearly delineated once defined. The work zones shown on Figure C-2 are described in more detail below.

### 2.1 WORK ZONES

Each work area will consist of an exclusion zone, a contamination reduction zone, and a support zone:

- **Exclusion Zone:** The outer perimeter of each work area defines the outer perimeter of the exclusion zone for that work area. Only authorized field personnel will be allowed in each exclusion zone. The initial level of protection required in the exclusion zone may be adjusted as conditions change. Levels of protection are discussed in more detail in Section 5.
- **Contamination Reduction Zone:** All personnel and equipment will leave the exclusion zone through a contamination reduction zone. Both personnel and equipment decontamination will occur in this zone to prevent the transfer of contaminants to the support zone (decontamination procedures are specified in Section 3.2.3). The transition from the exclusion zone to the contamination reduction zone is shown schematically on Figure C-2.
- **Support Zone:** Located adjacent to the contamination reduction zone, the support zone is where all personnel will suit up in specified personal protective equipment before entering the work area defined by the exclusion zone. The support zone includes clean equipment storage and personnel resting and eating facilities.

Each zone in each work area will be established on an activity-by-activity basis prior to initiation of work and will be clearly delineated (marked by tape or fencing).

### 2.2 SITE SECURITY

Most of the area in which field activities will occur is a restricted-access industrial area. For work activities that are conducted in areas with public access, the work area will be blocked off and posted.

## 3.0 SAFETY RULES AND PROCEDURES

Safety is the responsibility of every individual involved in project efforts. Whether in the office or in the field, properly followed procedures are essential for personal safety and to minimize injuries or accidents involving equipment. Potential hazards while working at the site include, but are not limited:

- Exposure to toxic and/or hazardous chemicals
- Physical hazards from use of drilling, sampling, and testing equipment
- Physical hazards from heavy equipment
- Physical hazards from working conditions (e.g., heat stress, hypothermia).

### 3.1 SAFETY RULES

All personnel working in the field will follow the rules and procedures listed below:

- All personnel will conduct themselves in a professional manner at all times.
- No personnel will be admitted into an operational exclusion zone without safety equipment in proper working condition and requisite training.
- All personnel must comply with the established safety procedures. Anyone working onsite for Landau Associates who does not comply with this health and safety plan may be immediately dismissed from the site. Anyone working under contract with Landau Associates at Time Oil who does not comply with a health and safety plan at least as stringent as this health and safety plan may be immediately dismissed from the site.
- Working while under the influence of intoxicants, narcotics, or controlled substances is prohibited. Prescription drugs should not be taken by personnel if the potential for contact with toxic substances exists, unless approved in writing by a physician.
- Firearms, ammunition, fireworks, and explosives are prohibited.
- Climbing or standing on machinery (other than drill rigs or service trucks) or equipment is prohibited unless authorized by the site safety officer.
- Long hair must be contained inside a hard hat. Facial hair that interferes with proper operation and fit of respiratory protection gear is not allowed.
- A team system will be used within an exclusion zone. During site operations, each worker is a safety backup for his/her team partners and should make all personnel aware of dangerous situations that may develop.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in an exclusion zone.
- Smoking or consumption of food and beverages is allowed only within designated areas in the support zones.
- Disposable clothing will be used whenever necessary and appropriate to minimize the risk of cross contamination.
- The number of personnel and the amount of equipment in contaminated areas will be minimized to allow for efficient site operations.
- Samples will be collected only by trained and authorized personnel.
- Unnecessary and unprotected contact with contaminated or potentially contaminated material will be avoided. Efforts will be made to stage site activity upwind of investigative equipment, activities, and materials.
- Proper decontamination procedures will be followed before leaving an exclusion zone and the site, unless medical emergencies dictate otherwise (Section 3.2.3). All decontamination residual materials, and any other potentially contaminated materials, will be handled properly and kept onsite or at a designated secure area.
- Only approved work clothes or equipment will be allowed within the exclusion zones.
- Exchange of personal protective equipment will not be allowed.

## 3.2 SAFETY PROCEDURES

The following safety procedures should be followed by personnel involved in environmental activities covered by this health and safety plan.

### 3.2.1 LEAVING THE SUPPORT ZONE TO ENTER WORK AREAS

- Before beginning investigation activities, review all site information updates. These updates will be provided by the site safety officer as necessary to provide new information concerning:
  - Expected hazards
  - Special conditions
  - Sampling procedures
  - Location of phones

- Emergency medical information
- Level of personal protection required
- Finish eating and extinguish smoking materials prior to suiting up.
- Attend safety briefing and worker question and answer period, as applicable.
- Check safety gear and equipment. Suit up as required to begin activities.
- Measure and delineate exclusion zone (unless established previously).

### **3.2.2 ACTIVITIES IN EXCLUSION ZONE**

- All activities will be conducted at a minimum of Level D (modified) as described in Section 5.
- For activities capable of creating volatile airborne contamination, levels of personal protection will be adjusted according to results of work zone air monitoring (Section 6).
- Whenever possible, personnel will be stationed upwind of field activities capable of creating airborne contamination.
- If any physical discomfort is experienced (e.g., abnormalities, nausea, lightheadedness), immediately stop work, tell the other team members, and leave the area.
- If any personal protective equipment fails, immediately leave the area.
- One person must never be left alone in an exclusion zone.
- Use maximum care in handling samples. If the sampling site is not accessible using gear available (i.e., water too high, slippery or steeply sloped surface, holes, etc.), confer with the Landau Associates' project manager and/or site safety officer, as appropriate, to arrange an alternate sampling site or appropriate equipment/procedures to obtain samples safely.
- Immediately wipe off spills and dirt from sampling containers.

### **3.2.3 WORK AREA EXIT DECONTAMINATION**

All personnel and equipment must be properly decontaminated, as described below, before entering a support zone from an exclusion zone. All contaminated equipment and materials will leave only through the contamination reduction zone or will be contained onsite; any potentially contaminated materials will be kept in designated, secure locations.

### 3.2.3.1 Routine Decontamination Procedures

A decontamination area will be set up in the contamination reduction zone at the border of each exclusion zone. Prior to leaving the exclusion zone:

- Portable sampling equipment which has some direct contact with contaminated materials will be washed or placed in/on plastic for transport to equipment decontamination area
- Drilling rig auger flights will be placed on a trailer for transport to the decontamination area or will be decontaminated on a portable trailer, designed for that purpose
- Drill cuttings will be brushed and/or washed off the drill rig before moving the rig to the decontamination area, to reduce the transport of potentially contaminated materials from the exclusion zone.

In the contaminant reduction zone, sampling, drilling, and other equipment will be decontaminated as follows:

- Sampling equipment will be decontaminated as outlined in the work plan.
- All heavy equipment must be decontaminated before leaving an exclusion zone, with particular care taken in decontaminating those parts of the heavy equipment that have come in direct contact with contaminants, such as tracks, tires, shovels, grapples, and scoops. High-pressure hot water cleaning will be used for these, aided by physical scrubbing with disposable brushes when necessary to loosen caked materials. All portions of the equipment, including the undercarriage, chassis, and cab, will also be inspected and cleaned as necessary.
- Any vehicle used for transportation in an exclusion zone will be equipped with seat covers that can be easily wiped down. All such vehicles must be decontaminated prior to leaving the exclusion zone. Decontamination will include, at a minimum, high pressure washing of the exterior and, as necessary, wet wiping the interior and scrubbing of the exterior.
- After sampling, drilling, or other equipment is properly decontaminated, personal protective equipment will be removed and washed and/or containerized prior to leaving the contaminant reduction zone.

Certain parts of contaminated respirators, such as the harness assembly or cloth components, are difficult to decontaminate. If grossly contaminated, they will be discarded. Rubber components will be soaked in soap and water and scrubbed with a brush. Respirators will be sanitized by rinsing in a detergent solution followed by a clear rinse, then hung to dry.

### **3.2.3.2 Emergency Decontamination**

In case of an emergency, personal decontamination procedures will be speedily implemented if possible. If a life-threatening injury occurs and the injured person cannot undergo decontamination procedures without incurring additional injuries or risk, he or she will be transported wrapped in plastic sheeting if time allows and if consistent with the injury. The medical facility will be: 1) informed that the injured person has not been decontaminated, and 2) given information regarding the most probable contaminants.

### **3.2.4 DISPOSAL OF CONTAMINATED FLUIDS AND MATERIALS**

All equipment and materials used for decontamination or personal protection will be cleaned or collected for appropriate disposal. All nondisposable equipment will be decontaminated onsite. Disposables will be containerized. Contaminated liquids will be collected in storage tanks or containers and temporarily stored in a secure location. Storage and/or disposal will be conducted in accordance with the RI/FS work plan and any amendments.

### **3.2.5 HOUSEKEEPING**

Work areas will be kept as clean and orderly as possible at all times. Ordinary refuse will be placed in suitable rubbish bins or trash containers at the site. The storage or introduction of extraneous materials will be minimized in the exclusion zone to minimize the decontamination load and reduce possibilities for cross contamination.

### **3.2.6 VISITORS**

Authorized visitors will only be allowed to observe operations from the support zone or beyond, and must obey all instructions of the site safety officer and/or Time Oil's representative. Representatives from the Oregon Department of Environmental Quality (DEQ), the Oregon Occupational Safety and Health Division, and U.S. Environmental Protection Agency (EPA) must also possess appropriate health and safety equipment at the time of the visit, and follow a health and safety plan at least as stringent as this plan, or adopt this plan as their own.

## 4.0 ANALYSIS OF SITE HAZARDS AND RISKS

### 4.1 BASIS FOR ANALYSIS

Results of previous investigations within the Northwest Terminal have identified the presence of contaminants of concern. Maximum concentrations of constituents detected in soil, groundwater, and other media at the site are summarized in Table C-1 along with occupational exposure criteria, as available, and potential exposure pathways of concern.

The planned activities will involve physical hazards inherent with working outside and in the presence of heavy equipment. In addition, activities conducted within the vicinity of active bulk storage involve explosive hazards.

### 4.2 SUSPECTED HAZARDOUS SUBSTANCES

There is a potential for field personnel to become exposed to contaminants in the defined work areas. Dermal, inhalation, and incidental ingestion exposures are possible. The general risk of exposure on the site is low to moderate, but may be high in individual work areas.

Current site contamination could lead to dermal contact during intrusive activities, such as excavation, drilling, drum removal, and soil or groundwater sampling. Dermal protection, as defined in Section 5.2, will, therefore, be required for all such activities. Volatilization or dust suspension of certain site contaminants could pose risk of inhalation exposures. Action levels and the associated respiratory protection for potential inhalation exposures will be based initially on constituent concentrations presented in Table C-1 and will be adjusted thereafter based on ambient monitoring data to be collected during field activities (Section 6).

## 5.0 PERSONAL SAFETY EQUIPMENT

### 5.1 LEVELS OF PROTECTION

Levels of protection have been defined as follows by the EPA in their *Standard Operating Guide* (EPA 1984):

- Level A requires a fully encapsulating suit and full face piece, positive pressure, self-contained breathing apparatus (SCBA) with a 5-minute, supplied air escape pack for the highest level of respiratory, skin, and eye protection. Level A is not anticipated at this site and, therefore, is not discussed further.
- Level B requires maximum respiratory protection through the use of supplied air or a positive pressure SCBA. A 5-minute, supplied air escape pack is required while in Level B. Dermal protection is selected on the basis of anticipated hazards. Level B is not anticipated at this site, and therefore, is not discussed further.
- Level C requires an air purifying respirator that is specific to the contaminants of concern. The degree of dermal protection depends on anticipated hazards.
- Level D is the basic work uniform, modified for work at this site, as described in Section 5.2.

There are numerous variations and modifications possible with each level of protection. Personal protection action levels for site environmental activities are discussed in Section 6.

### 5.2 REQUIRED EQUIPMENT

The level of protection designated for environmental activities defines the level of protection that should be initially used; subsequent air monitoring results may indicate that a downgrading (or upgrading) in the level of protection is allowable and appropriate. Level C protection is initially recommended for intrusive work (drilling, digging, or otherwise disturbing soil, accessing monitoring wells for water level measurements or sampling, etc.) only. Level D (modified) is considered appropriate for nonintrusive activities unless air monitoring indicates that an upgrade is necessary. The following sections define Level C and Level D (modified) protective equipment. As noted previously, these levels of protection are not required for site activities that are limited to walking across any exclusion zone designated in this plan if the RI activities are not in progress in that exclusion zone, and if the activities in progress in any other designated exclusion zone do not represent a reasonable risk of exposure.

### **5.2.1 LEVEL D (MODIFIED)**

Level D (modified) protection consists of the following personal safety equipment:

- One-piece disposable Tyvek coveralls, which are resistant to PCP, will be used. Coveralls will be taped at wrists and ankles if wet or excessively dusty conditions are expected.
- PVC inner-disposable gloves.
- Neoprene and/or nitrile outer gloves.
- Neoprene, chemically resistant, impermeable outer boots with steel toes and shanks.
- Hard hat (with splash shield if liquid splashes or sprays are likely to be encountered); not required when groundwater monitoring is the only activity occurring in the exclusion zone.
- Safety glasses with side shields (for intrusive work and groundwater sampling only).

In work areas initially designated as Level C, Level D (modified) personal safety equipment may only be worn after the site safety officer has made a determination that exposure to hazardous materials will not approach the threshold limit value/permissible exposure level (TLV/PEL).

### **5.2.2 LEVEL C**

Level C protection consists of the following personal safety equipment:

- All Level D (modified) equipment described above (including all equipment identified for intrusive work)
- Half-face air purifying respirator equipped with organic vapor/HEPA cartridges. If contaminated liquid splashes or sprays are likely to be encountered, full-face air purifying respirators equipped with organic vapor/HEPA cartridges shall be used.

## 6.0 SITE MONITORING AND ACTION LEVELS

Air monitoring (including the use of specific air monitoring equipment and visual observations) is required to determine the effectiveness of the engineering controls, to re-evaluate levels of protection, and determine if site conditions have changed. Air monitoring will be conducted at the beginning of the work shift and periodically during the progress of the work, as described. Air monitoring will be conducted during the course of all activities within the work zone, including cleaning, excavation, and decontamination of equipment.

The following procedures will be followed to accomplish air monitoring appropriate for the activities addressed in this health and safety plan:

- Each piece of monitoring equipment will be inspected before work start-up. Failure of any of the health and safety equipment required by this plan must be reported to the site health and safety officer immediately. Work in the exclusion zone is not to continue beyond the monitoring cycle if the monitoring equipment is not working properly.
- Before initially entering the work area, air monitoring will be conducted at the boundary of the work area (approximately 35 ft upwind) and proceed inward to verify or adjust the level of protection needed for the planned activities. This initial monitoring will be conducted in Level C, with full face respirator. Thereafter, air monitoring will be conducted as described below to verify the appropriate level of respiratory protection (action levels are provided in Table C-4). The personal protective equipment requirements established through the monitoring program will apply to the area within a 30-ft radius of where the monitoring is conducted.

### 6.1 VOLATILE ORGANIC COMPOUNDS

Substances that are most hazardous from a chronic inhalation standpoint are those that are relatively volatile, highly toxic (i.e., low TLV or PEL) and have an odor threshold much higher than the TLV. If a substance has an odor threshold higher than the TLV, it is considered to have poor warning properties because its odor would not be detected until after the acceptable airborne concentration (TLV or PEL) has been exceeded. The designated site safety officer will have a photoionization detector (PID, such as a MicroTIP meter) onsite at all times when intrusive activities are conducted and will establish background volatile organic compound concentrations well upwind of any excavation, spoils pile, or borehole. PID readings will be taken periodically (at a minimum, every  $\frac{1}{2}$  hour) during all intrusive work within each exclusion zone, and at least once during decontamination activities in the contaminant reduction zone. A table showing the relative

response of the PID to different chemical constituents at different lamp energies will be kept with each instrument for field reference. The PID will be calibrated before each day's activity according to manufacturer's instruction. Calibrations will be recorded with the span gas in a log book dedicated to that instrument. Recalibration will be conducted periodically, as the instrument is sensitive to dust. In addition to PID monitoring, constituent-specific detector tubes (e.g., Draeger tubes) may be required to clarify the level of protection necessary during site environmental activities. Action levels for volatile organic compounds are discussed below and are summarized in Table C-4.

#### 6.1.1 ACTION LEVELS OUTSIDE ACTIVE TANK FARM AREAS

The organic vapor action level for field activities outside the active tank farm area is 10 ppm, based on toluene. The PEL for toluene is 50 ppm, and the action level is set below the PEL to account for other constituents which may be present. While monitoring with the PID, *any consistent readings in the breathing zone that are greater than 5 ppm above the upwind background level for more than 5 minutes, or any readings in the breathing zone greater than 10 ppm other than a momentary peak* shall be the action level for donning half-face air purifying respirators equipped with organic vapor/particulate cartridges. Cartridges will be replaced either immediately upon any indication of breakthrough or after each day of use.

*Any readings consistently greater than 10 ppm above background or greater than 50 ppm other than for a brief peak, or any peak reading greater than 100 ppm in the breathing zone,* will be the action level for exiting the area.

#### 6.1.2 ACTION LEVELS WITHIN ACTIVE TANK FARM AREAS

Benzene has the lowest PEL (1 ppm) for any of the volatile contaminants expected at the site. The action level for allowing downgrading of the level of respiratory protection within active tank farm areas will be based on benzene. Action levels are provided in Table C-4.

Note that *any readings consistently greater than 50 ppm other than for a brief peak, or any peak reading greater than 250 ppm in the breathing zone,* will be the action level for exiting the area.

When conducting intrusive activities within the active tank farm area, a dosimeter badge will be worn in the breathing zone over one typical 8-hour work shift by one employee expected to experience the most representative benzene exposure. The badge will be submitted to the

laboratory for analysis with the soil samples (care should be taken to package the dosimeter so that there is no cross-media transfer from the soil samples).

## 6.2 NONVOLATILE COMPOUNDS IN AIRBORNE DUST

A number of contaminants that pose potential risks due to inhalation via contaminated airborne dust have been identified onsite. The potential for airborne dust containing these constituents will depend on site conditions at the time of the environmental activities (primarily the moisture content of the soil) and the nature of the activities. If the soil is well watered and the wind is calm, the potential for dust suspension is greatly lowered.

Of the identified constituents, the greatest risk due to airborne dust is provided by PCP, which is found in varying concentrations across the site. The designated site safety officer will make a determination before commencement of daily activities, and at other times during hot and windy weather, as to the potential for unacceptable levels of airborne dust. If the site safety officer determines that the potential is low (e.g., the soil is moist or non-dusty and/or activities pose a low dust generation potential), no action is required (a modified Level D level of protection will be used). If the site safety officer judges that the potential is moderate to high (e.g., soil is in a dry and dusty condition or intrusive activities pose a high dust generation potential), then half face air purifying respirators equipped with organic vapor/particulate cartridges will be worn. In the event of visible blowing dust, operations will cease and personnel will leave the area until such time as site air conditions improve.

As an alternate, the site safety officer can use a real-time dust monitoring instrument (e.g., MiniRam) to determine the actions required. With a reading of less than  $4 \mu\text{g}/\text{m}^3$ , modified Level D is sufficiently protective. If the monitor reads greater than  $4 \mu\text{g}/\text{m}^3$  but less than  $50 \mu\text{g}/\text{m}^3$ , then protective equipment will be upgraded to Level C. Above  $50 \mu\text{g}/\text{m}^3$ , operations will cease and personnel will leave the area until site air conditions improve.

## 6.3 EXPLOSIVE CONDITIONS

In the active tank farm area, before initiating work activities and during intrusive activities, the potential for explosive conditions will be monitored using a combustible gas indicator (CGI) and an oxygen meter with the alarm set to auditory. The CGI will be calibrated before each day's activities according to manufacturer's instructions. Prior to all drilling and other intrusive activities at least every  $\frac{1}{2}$  hour thereafter, CGI and oxygen meter readings will be monitored and recorded

in the field notes. If odor, taste, or discomfort is detected by any employee, or if any of the action levels noted in Table C-4 are exceeded, monitoring is to be done continuously. If explosive conditions are identified at any time, work activities will cease and the area will be evacuated. Re-entry will only be allowed following progressive monitoring inward from the boundary of the work area that indicates that explosive conditions have been mitigated. Mitigation measures may include use of fans to dissipate vapors.

## 7.0 EMERGENCY RESPONSE

### 7.1 REPORTING/NOTIFICATION PROCEDURES

In the case of any emergency, the site safety officer will be notified immediately. If the situation is life threatening and notification of the site safety officer would delay emergency response, field personnel may initiate the appropriate emergency contacts prior to notifying the site safety officer. The site safety officer will then initiate contacts as follows:

1. Call appropriate emergency services numbers (ambulance, fire, etc.) if not already done and provide the following information:
  - Name and location of person reporting
  - Location of accident/incident
  - Name and affiliation of injured party
  - Description of injuries
  - Status of medical aid effort
  - Details of any chemicals involved
  - Summary of the accident, including the suspected cause and the time it occurred
  - Temporary control measures taken to minimize further risk.

Note: This information is not to be released under any circumstances to parties other than the site safety officer, project safety officer, Landau Associates project manager, Time Oil, and bona fide emergency response team members.

2. Call the Landau Associates' project manager and the Time Oil representative (Table C-5) and provide information noted in item 1 above.

The site safety officer will complete a written accident/incident report using Table C-6, within 24 hours, sending copies to each of the project managers.

Resources to be used in cases of emergency include:

- List of Emergency Contacts: Table C-5 includes both the appropriate emergency services (top of table) and the appropriate project contacts (bottom of table).

- Nearest Phone: As of the date of this plan, telephones are located at the Time Oil Co. site office (see Figure C-1).
- Onsite Emergency Equipment: An industrial first aid kit, a 20-pound type ABC portable fire extinguisher, and an eyewash kit will accompany each field vehicle.
- Offsite Emergency Services: Phone numbers for offsite emergency services are listed in Table C-5. Copies of this table will be located in each vehicle. After the required emergency contacts are made, Time Oil and Landau Associates' project managers should be promptly notified by the site safety officer.
- Hospital Route: Good Samaritan Hospital is located near the site and should be utilized where care beyond standard first aid is required. Figure C-3 shows the route to the hospital. Onsite field personnel should become familiar with this route prior to field activities. Driving time from the site to Good Samaritan Hospital is estimated to be about 15 to 20 minutes, depending on traffic conditions.

## 7.2 NON-LIFE THREATENING EMERGENCIES

### 7.2.1 INJURIES

In emergency situations which are not life threatening (e.g., a broken leg), normal decontamination procedures should be followed when possible. However, decontamination procedures may be modified according to the specific circumstances. Outer protective clothing should be removed if doing so would not cause delays or aggravate the injury. Respirators should only be removed: 1) if the victim has stopped breathing, or 2) after the victim has been removed from a breathing hazard area.

Bodily injuries which occur as a result of an accident during operations at the site will be handled in the following manner:

- The victim will be administered to by an individual who holds current first aid and/or CPR certification, as necessary
- The local first aid squad/rescue unit and the local hospital (Good Samaritan Hospital, Portland) will be notified as appropriate, depending on the nature of the emergency.

### 7.2.2 HEAT STRESS

Heat stress can occur at any time when protective clothing is worn. Workers wearing semipermeable or impermeable encapsulating clothing should be monitored for heat stress through regular checks of heart rate and by more comprehensive monitoring when the temperature in the work area is above 55 to 60°F. A pulse rate in excess of 150 beats per minute may indicate heat

exhaustion, although this rate will vary among workers. All personnel shall know what their baseline pulse rate is before working in elevated temperatures, so as to monitor themselves. The site safety officer will be trained in monitoring, treating, and recognizing the signs of heat stress. If heat stress occurs, decontamination should be minimized and treatment begun immediately, unless the victim is obviously contaminated.

#### 7.2.3 COLD STRESS

Fieldwork may be conducted during the winter months, when site personnel may be subject to low temperatures, rain, and winds. In these conditions, field teams must be prepared to wear proper protective clothing and to recognize symptoms of cold stress.

Cold stress can be manifested as both hypothermia and frostbite:

- Hypothermia is a cold-induced decrease in the core body temperature that can increase the safety hazards associated with investigation activities that require maximum attentiveness and manual dexterity. Hypothermia produces shivering, numbness, drowsiness, muscular weakness, and, if severe enough, death.
- Frostbite results from the constriction of blood vessels in the extremities, decreasing the supply of warming blood to these areas. This drop in blood supply may result in the formation of ice crystals in the tissues, causing tissue damage. The symptoms of frostbite are white or grayish skin, blisters, or numbness.

Site personnel should review the information provided in their first aid training for response to cold stress problems.

#### 7.2.4 FLU-LIKE SYMPTOMS

Any site personnel experiencing flu-like symptoms should notify the site safety officer. Such symptoms may be sufficient cause for ceasing operations until the work area is evaluated and a "return to operations" order given by the site safety officer.

### 7.3 FIRE

Fire extinguishers (ABC-type) will be kept in each vehicle and drilling rig. This equipment will be used only to respond to small fires. In the event of major fires, explosions, or fire/explosion hazard conditions, all personnel will immediately evacuate the area. The site safety officer will evaluate the need for further evacuation and/or emergency services.

## **7.4 SITE EVALUATION AND EVACUATION**

The site safety officer will be responsible for determining if circumstances exist which require further evaluation and/or site evacuation. The site safety officer should always assume worst-case conditions until proven otherwise. Specific evacuation procedures and warning signs and signals will be covered in the health and safety training session prior to beginning work.

Two levels of evacuation may be considered:

- Withdrawal from the immediate work area onsite
- Evacuation of the surrounding area.

These are discussed further below.

### **7.4.1 WITHDRAWAL FROM WORK AREA**

Withdrawal to a safe upwind location will be required under the following circumstances:

- Detection of volatile organics and/or toxic gases at concentrations above action levels for the level of protection being worn (Section 6)
- Occurrence of a minor accident—field operations may resume after first aid and decontamination procedures have been administered
- Malfunction or failure of protective equipment, clothing, or respirator.

The following hand signals will be used by site personnel to communication within the work zone if respiratory protection is being used:

- Thumbs up - okay
- Thumbs down - not okay
- Hands on wrist - exit exclusion zone
- Hands on throat - cannot breath.

### **7.4.2 EVACUATION OF SURROUNDING AREA**

There are no reasonably foreseeable conditions, based on current knowledge of the site, that would require evacuation of the surrounding area. The site coordinators, in consultation with the site safety officer and, as appropriate, the Landau Associates' project manager, will be responsible for determining if circumstances exist for area-wide evacuation, and should always assume

reasonable worst-case conditions until proven otherwise. Fire and police departments must be contacted in such cases. If evacuation is necessary, it will be implemented with the assistance of the appropriate emergency response personnel (Table C-5).

Procedures for reporting accidents/incidents are provided in Section 7.1. They will be performed in the order indicated.

## 8.0 TRAINING

All personnel performing onsite investigation tasks shall have completed formal health and safety training, which complies with 29 CFR 1910.120 and Oregon Administrative Rule (OAR) Chapter 437 (certificates of successful completion of training will be maintained in job files), and shall verify on-the-job training for those tasks they are assigned to perform. At least one member of each field team will be trained in CPR and first aid. All planned activities will be reviewed with the field personnel by the site safety officer and unfamiliar operations will be rehearsed prior to performing the actual procedures.

## 9.0 ROUTINE HEALTH CARE AND MONITORING

All persons working in an exclusion zone must have a medical evaluation to determine their baseline medical status prior to any site work. Follow-up examinations are appropriate if exposures are known or suspected to have occurred. Documentation of medical evaluations for all field personnel will be maintained by the site safety officer.

## 10.0 REFERENCES

ACGIH. 1992. *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, 1991-1992.* American Council of Governmental Industrial Hygienists, Cincinnati, OH.

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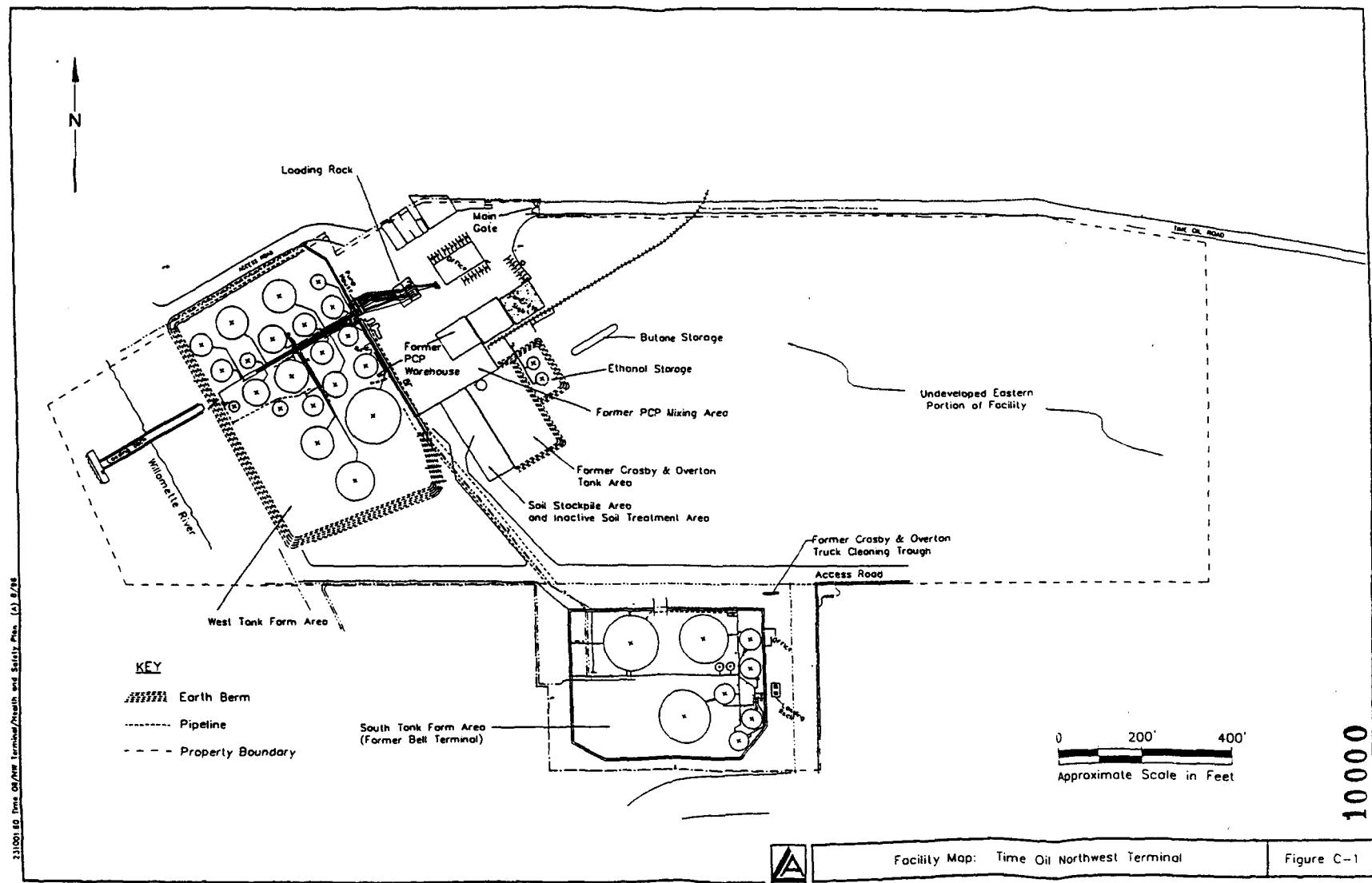
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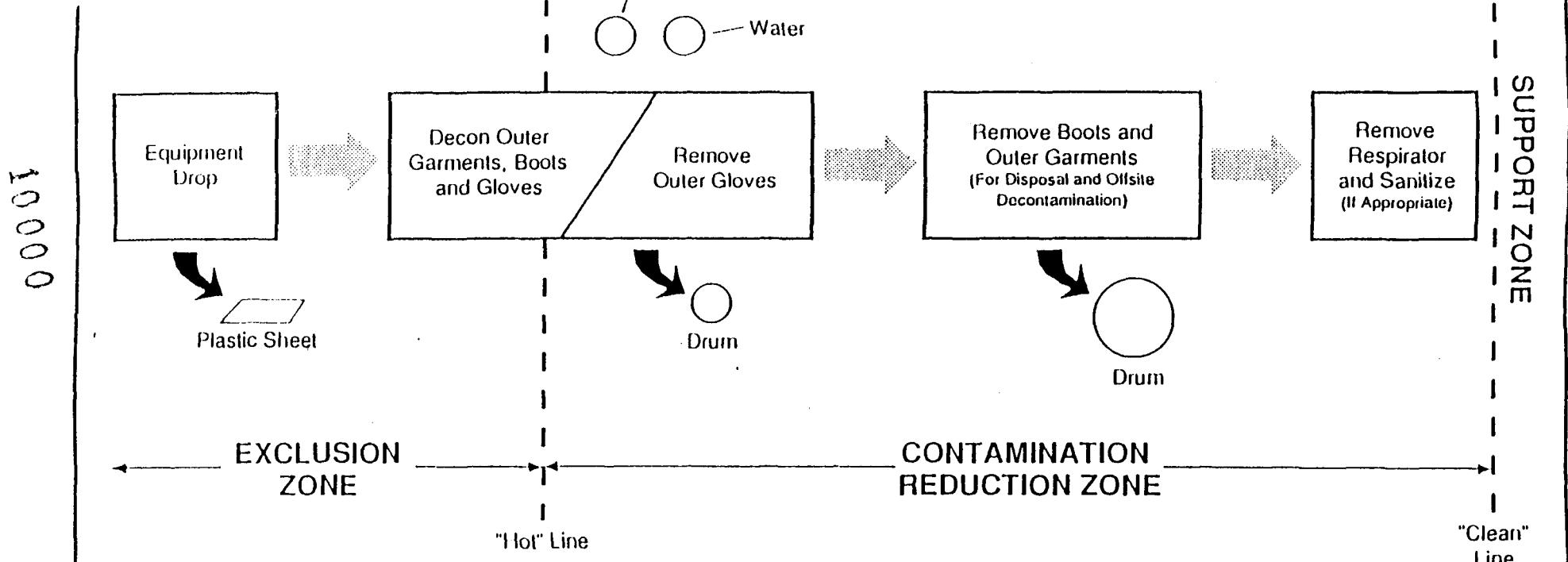
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Schematic of Transition from Exclusion Zone  
to Contamination Reduction Zone to Support Zone

Figure C-2

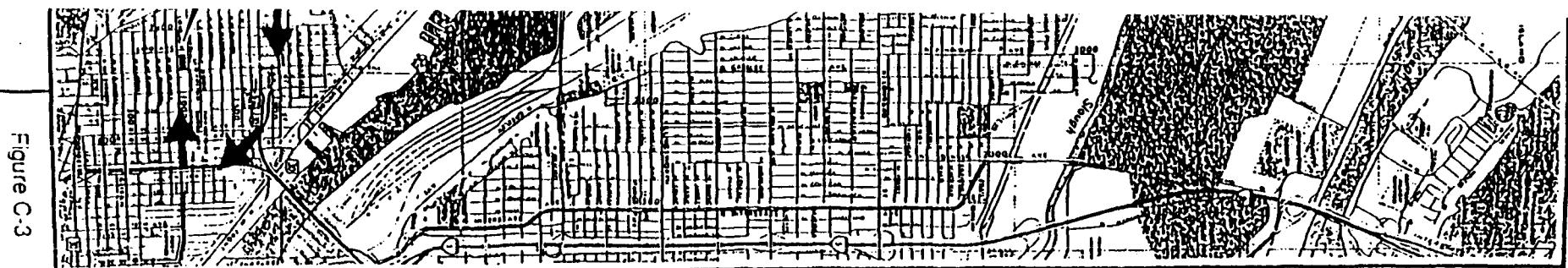


Figure C-3

TABLE C-1  
SITE EXPOSURE ASSESSMENT  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite			TLV <sup>(b)</sup>	PEL <sup>(c)</sup>	IDLH <sup>(d)</sup>	Exposure Routes <sup>(e)</sup>	Symptoms of Exposure
	Soil (mg/kg)	Groundwater (mg/L)	Other Media <sup>(f)</sup> (mg/kg (mg/L))					
<b>Organic Chemicals</b>								
Acenaphthene	50	NA	910 <sup>(g)</sup>	DNA	DNA	DNA	DNA	DNA
Acenaphthylene	8.8	NA	ND	DNA	DNA	DNA	DNA	DNA
Anthracene	200	NA	9,100 <sup>(g)</sup>	0.2 ppm <sup>(h)</sup>	0.2 ppm <sup>(h)</sup>	DNA	Inh, Ing, Abs, Con	DNA
Benzene	1	0.64	ND	0.1 ppm	1 ppm	500 ppm	Inh, Abs, Ing, Con	Irritated eyes, nose, respiratory tract, skin
Benzo(a)anthracene	14	NA	160 <sup>(g)</sup>	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Benzo(b)fluoranthene	14	NA	ND	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Benzo(k)fluoranthene	6.6	NA	ND	DNA	DNA	DNA	DNA	DNA
Benzo(g,h,i)perylene	250	NA	6 <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
Benzo(a)pyrene	9.4	NA	90 <sup>(h)</sup>	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Bis(2-ethylhexyl)phthalate	3	NA	75 <sup>(h)</sup> (0.260) <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
n-Butylbenzene	ND	ND	ND (0.052) <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
di-n-Butylphthalate	0.11 <sup>(h)</sup>	NA	ND	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	4,000 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, lung, stomach irritation
2-Chlorophenol	5.3	NA	ND	DNA	DNA	DNA	DNA	DNA
Chrysene	31	NA	630 <sup>(h)</sup> (ND)	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
1,1-Dichloroethane	ND	NA	88 <sup>(h)</sup>	100 ppm	100 ppm	3,000 ppm	Inh, Ing, Con	Skin irritation; liver, kidney, lung damage
2,4-Dichlorophenol	3.6	ND	ND	DNA	DNA	DNA	DNA	DNA
2,4-Dinitrotoluene	3	NA	ND	0.15 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Anoxia, cyanosis, reproductive effects
Dioxins and furans (TEQ)	0.003	NA	NA	DNA	DNA	DNA	DNA	DNA
Ethyl alcohol	NA	NA	NA	1,000 ppm	1,000 ppm	3,300 ppm	Inh, Ing, Con	Eye, nose, skin irritation, drowsiness, fatigue, headache
Ethylbenzene	NA	1.2	0.002 <sup>(h)</sup>	100 ppm	100 ppm	800 ppm	Inh, Ing, Con	Irritated eyes, headache
Fluoranthene	80	NA	910 <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
Fluorene	80	NA	2,300 <sup>(h)</sup>	DNA	DNA	DNA	Inh, Ing, Abs, Con	DNA
2-Hexanone	ND	NA	ND(3.2) <sup>(h)</sup>	5 ppm	100 ppm	1,600 ppm	Inh, Abs, Ing, Con	Eye, nose irritation; drowsiness
Indeno(1,2,3-cd)pyrene	1.7	NA	ND	DNA	DNA	DNA	DNA	DNA
Isophorene	1	NA	ND	5 ppm	25 ppm	200 ppm	Inh, Ing, Con	Eye, nose, throat irritation

TABLE C-1  
SITE EXPOSURE ASSESSMENT  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite			TLV <sup>(a)</sup>	PEL <sup>(a)</sup>	IDLH <sup>(d)</sup>	Exposure Routes <sup>(a)</sup>	Symptoms of Exposure
	Soil (mg/kg)	Groundwater (mg/L)	Other Media <sup>(a)</sup> (mg/kg (mg/L))					
4-Isopropyltoluene	0.0016	NA	ND	DNA	DNA	DNA	DNA	DNA
Kerosene	NA	NA	NA	DNA	DNA	DNA	Inh, Ing, Abs, Con	DNA
Mineral spirits	NA	NA	NA	500 ppm <sup>(b)</sup>	DNA	1,100 ppm	Inh, Ing, Con	Irritated eyes, respiratory system
Naphthalene	100	NA	1,300 <sup>(b)</sup>	10 ppm	10 ppm	250 ppm	Inh, Abs, Ing, Con	Eye irritation, vomiting
n-Nitrosodiphenylamine	28	NA	ND	DNA	DNA	DNA	DNA	DNA
PCB	68	NA	NA	0.5 mg/m <sup>3</sup> (skin)	0.5 mg/m <sup>3</sup>	5.0 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Eye, nose, throat, skin irritation, chloracne
Pentachlorophenol	116,000	60	1,200,000 <sup>(b)</sup> (9,900) <sup>(b)</sup>	0.5 mg/m <sup>3</sup> (skin)	0.5 mg/m <sup>3</sup> (skin)	2.5 mg/m <sup>3</sup>	Inh, Ing, Abs, Con	Eye, nose, throat irritation, sneezing, weakness, nausea
Phenanthrene	200	NA	4,600 <sup>(b)</sup>	0.2 ppm <sup>(c)</sup>	0.2 ppm <sup>(c)</sup>	DNA	Inh, Ing, Abs, Con	Skin photosensitization
n-Propylbenzene	ND	NA	0.002 <sup>(b)</sup> (0.24) <sup>(b)</sup>	DNA	DNA	DNA	DNA	DNA
Pyrene	50	NA	550 <sup>(b)</sup> (0.014) <sup>(b)</sup>	DNA	DNA	DNA	DNA	DNA
TPH	16,430	56	150,000 <sup>(b)</sup> (360) <sup>(b)</sup>	DNA	DNA	DNA	Inh, Abs, Ing, Con	See benzene, toluene, ethylbenzene, and xylene
2,3,4,6-Tetrachlorophenol	71	0.17	ND	DNA	DNA	DNA	Inh, Ing, Con, Abs	DNA
2,3,5,6-Tetrachlorophenol	ND	0.1	ND	DNA	DNA	DNA	DNA	DNA
Toluene	12	1.6	ND (0.0017) <sup>(b)</sup>	50 ppm	100 ppm <sup>(m)</sup>	500 ppm	Inh, Abs, Ing, Con	Fatigue, dizziness, headache, irritated eyes and nose
Trichloroethene	ND	NA	35 <sup>(b)</sup>	50 ppm	100 ppm	1,000 ppm	Inh, Abs, Ing, Con	Eye, skin irritation; fatigue; liver damage
1,2,4-Trimethylbenzene	ND	NA	0.023 <sup>(b)</sup> (2.4) <sup>(b)</sup>	25 ppm	25 ppm	DNA	Inh, Ing, Con	Eye, nose, throat, skin irritation
Xylenes	11	3.0	0.011 <sup>(b)</sup> (0.130) <sup>(b)</sup>	100 ppm	100 ppm	900 ppm	Inh, Abs, Ing, Con	Dizziness, drowsiness, nausea, irritated eyes and skin
<b>Metals</b>								
Antimony	8	NA	50 <sup>(b)</sup> (0.006) <sup>(b)</sup>	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, skin, nose, throat irritation
Arsenic	10	NA	150 <sup>(b)</sup> (0.008) <sup>(b)</sup>	0.001 mg/m <sup>3</sup>	0.01 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	Inh, Abs, Con, Ing	Ulceration of nasal septum, GI disturbances
Beryllium	0.4	NA	0.3 <sup>(b)</sup> (0.001) <sup>(b)</sup>	0.002 mg/m <sup>3</sup>	0.002	4 mg/m <sup>3</sup>	Inh, Con	Anorexia, weakness, chest pain
Cadmium	2.8	NA	118 <sup>(b)</sup> (0.21) <sup>(b)</sup>	0.01 mg/m <sup>3</sup>	0.005	9 mg/m <sup>3</sup>	Inh, Ing	Pulmonary edema, cough, nausea
Chromium	36.8	NA	48,700 <sup>(b)</sup> (2.1) <sup>(b)</sup>	0.5 mg/m <sup>3</sup>	0.5	25 mg/m <sup>3</sup>	Inh, Ing, Con	Eye irritation, dermatitis
Copper	90.5	NA	1,540 <sup>(b)</sup> (5.05) <sup>(b)</sup>	1 mg/m <sup>3</sup>	1	100 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, nose, pharynx irritation

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**TABLE C-1**  
**SITE EXPOSURE ASSESSMENT**  
**TIME OIL CO./NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite			TLV <sup>(b)</sup>	PEL <sup>(c)</sup>	IDLH <sup>(d)</sup>	Exposure Routes <sup>(e)</sup>	Symptoms of Exposure
	Soil (mg/kg)	Groundwater (mg/L)	Other Media <sup>(f)</sup> (mg/kg (mg/L))					
Lead	776	NA	186,000 <sup>(g)</sup> (12.3) <sup>(h)</sup>	0.15 mg/m <sup>3</sup>	0.05	100 mg/m <sup>3</sup>	Inh, Ing, Con	Weakness, lassitude, insomnia, kidney disease
Mercury	0.13	NA	223 <sup>(i)</sup> (0.0031) <sup>(h)</sup>	0.1 mg/m <sup>3</sup>	0.05	10 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Eye, skin irritation
Nickel	42	NA	60 <sup>(j)</sup> (3.7) <sup>(h)</sup>	1 mg/m <sup>3</sup>	1	10 mg/m <sup>3</sup>	Inh, Ing, Con	Dermatitis, asthma, pneumitis
Selenium	8	NA	80 <sup>(k)</sup> (ND)	0.2 mg/m <sup>3</sup>	0.2	1 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, skin, nose, throat irritation
Silver	0.6	NA	8 <sup>(l)</sup> (0.2) <sup>(h)</sup>	0.01 mg/m <sup>3</sup>	0.01	10 mg/m <sup>3</sup>	Inh, Ing, Con	Blue-gray eyes; skin, nose, throat irritation
Thallium	16	NA	140 <sup>(m)</sup> (0.009) <sup>(h)</sup>	0.1 mg/m <sup>3</sup>	0.1	15 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Nausea, diarrhea, abdominal pain
Zinc	1620	NA	4,180 <sup>(n)</sup> (21.0) <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA

DNA = data not available.

NA = not analyzed.

ND = not detected.

TEQ = toxicity equivalent quotient per EPA (1989).

J = the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

- (a) Other media refers to solids or residual material (e.g., drum contents, sludge). Results in parentheses are for water/liquids other than groundwater (e.g., drum liquids, standing water).
- (b) TLV = Threshold limit value, as defined by the American Council of Governmental Industrial Hygienists (1994).
- (c) PEL = Permissible exposure limit, as defined by the Occupational Safety and Health Administration (1995).
- (d) IDLH = immediately dangerous to life and health (NIOSH).
- (e) Exposure route codes: Inh = inhalation; Ing = ingestion; Con = skin and/or eye contact; Abs = skin absorption.
- (f) Results are for sludge removal from tanks located in the former Crosby and Overton tank area.
- (g) TLV/PEL for total coal tar pitch volatile s(benzene soluble fraction) includes anthracene, benzo(a)pyrene, phenanthrene, acridine, chrysene, and pyrene.
- (h) Result is for drum contents in eastern portion of the property.
- (i) Estimated value of analyte detected and confirmed by analyst with low spectral match parameters.
- (j) Result is for visually distinguishable surface solids limited to a small area in the eastern portion of the property.
- (k) TLV for mineral spirits is for petroleum distillates.
- (l) Pentachlorophenol result is >100% due to laboratory dilutions.
- (m) Per OAR 437, Division 2, Subdivision Z.

TABLE C-2  
ACKNOWLEDGEMENT

I have read the attached Health and Safety Plan for the work at Time Oil Co.'s Northwest Terminal, Portland, Oregon. I have discussed any questions which I have regarding these materials with my supervisor, and I understand the requirements of the health and safety plan.

Site Safety Officer \_\_\_\_\_ Date \_\_\_\_\_

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TABLE C-3  
MODIFICATION TO HEALTH AND SAFETY PLAN  
TIME OIL CO., NORTHWEST TERMINAL

DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

Modification: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reasons for Modification: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Site Personnel Briefed:

Name: _____	Date: _____

Approvals:

Site Safety Officer: _____
Manager: _____
Others: _____

**TABLE C-4**

**ACTION LEVELS FOR PERSONAL PROTECTION**  
**TIME OIL CO./NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Monitoring Parameter	Reading <sup>(a)</sup>	Level of Protection
<b>Within Active Tank Farm Area</b>		
Organic Vapors (during all intrusive activities)	PID reading >1 ppm in breathing zone for more than 15 minutes or >5 ppm for momentary peak  Detector tube reading for benzene is 0-1 ppm  PID or detector tube reading for benzene 1-10 ppm (or >50 ppm short term)  PID or detector tube reading for benzene is 10-50 ppm (or >250 ppm short term)  PID or detector tube reading >50 ppm or >250 ppm short term	Use detector tube  Modified Level C  Level C with half-face respirator with organic vapor and HEPA cartridges  Level C with full-face respirator with organic vapor and HEPA cartridges  Cease operations and evacuate area
Combustible Gas Indicator (Gas Tech GX8 2 or equivalent)	Explosive Atmosphere (measured at the source or near the excavation).  <10% LEL  >10% LEL	Continue activity, monitor for toxics  Evacuate all personnel from near excavation
Oxygen Meter	Oxygen (measured in breathing zone)  <19.5%  19.5-23.5%  >23.5%	Evacuate area  Continue monitoring  Remove and shut off ignition sources
Airborne dust	Soil is moist and nondusty or dust monitoring (MiniRam) reads <4 $\mu\text{g}/\text{m}^3$ over background  Soil is dry and dusty as judged by site safety officer or dust monitoring reads >4 or <50 $\mu\text{g}/\text{m}^3$ over background  Visible blowing dust clouds or dust monitor reads >50 $\mu\text{g}/\text{m}^3$ over background	Level D modified  Level C with half face respirator with organic vapor and HEPA cartridge  Cease operations until site conditions improve or soil is watered

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TABLE C-4

**ACTION LEVELS FOR PERSONAL PROTECTION  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON**

Monitoring Parameter	Reading <sup>(a)</sup>	Level of Protection
<b>All Other Areas of Facility</b>		
Organic Vapors <sup>(b)</sup>	0-5 ppm over background <sup>(c)</sup> (5 minutes)	Level D (modified)
	5-10 ppm over background	Level C - half-face air purifying respirator equipped with organic vapor and HEPA cartridges; full-face respirators with organic vapor and HEPA cartridges are required if contaminated liquid splashes or sprays are likely to be encountered
	>50 ppm over background	Leave the work area
	>100 ppm over background (instantaneous)	Leave the work area
Airborne dust	Soil is moist and nondusty or dust monitoring (MiniRam) reads <4 µg/m³ over background	Level D modified
	Soil is dry and dusty as judged by site safety officer or dust monitoring reads >4 or <50 µg/m³ over background	Level C with half face respirator with organic vapor and HEPA cartridge
	Visible blowing dust clouds or dust monitor reads >50 µg/m³ over background	Cease operations until site conditions improve or soil is watered

- (a) Readings are sustained readings over at least a 1-minute duration unless otherwise noted.
- (b) Determine using a photoionization or other appropriate organic vapor detector.
- (c) Background readings obtained 50 ft upwind of site activity.

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TABLE C-5

EMERGENCY SERVICES  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON

Service	Name/Location	Phone Number
Ambulance	--/--	911
Fire	--/--	911
Police	--/--	911
Hospital	Good Samaritan Hospital 1015 N.W. 22nd Avenue Portland, Oregon (driving time estimated at 15 to 20 minutes, traffic permitting)	229-7260

CONTACT INFORMATION

Time Oil

Kevin Murphy Senior Environmental Specialist	206/286-6443 (office) 206/680-5612 (pager)	Seattle, WA
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Landau Associates

Leslee Conner Project Manager	206/778-0907 (office) 206/781-8118 (home)	Edmonds, WA
Rebekah Brooks Health and Safety	206/778-0907 (office)	Edmonds, WA

TABLE C-6  
EMPLOYEE EXPOSURE/INJURY INCIDENT REPORT  
(Use additional page if necessary)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name: \_\_\_\_\_ Employer: \_\_\_\_\_

Site Name and Location: \_\_\_\_\_

Site Weather (clear, rain, snow, etc.): \_\_\_\_\_

Nature of Illness/Injury: \_\_\_\_\_  
\_\_\_\_\_

Symptoms: \_\_\_\_\_

Action Taken: Rest: \_\_\_\_\_ First Aid \_\_\_\_\_ Medical \_\_\_\_\_

Transported by: \_\_\_\_\_

Witnessed by: \_\_\_\_\_

Hospital's Name: \_\_\_\_\_

Treatment: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

What was the person doing at the time of the accident/incident? \_\_\_\_\_  
\_\_\_\_\_

Personal Protective Equipment Worn: \_\_\_\_\_  
\_\_\_\_\_

Cause of Accident/Incident: \_\_\_\_\_  
\_\_\_\_\_

What immediate action was taken to prevent recurrence? \_\_\_\_\_  
\_\_\_\_\_

Additional comments:

Employee's Signature:

Supervisor's Signature:

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

Site Safety Representative's Signature

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**ATTACHMENT 5**

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## **Bid Schedule**

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## ATTACHMENT 5

BID SCHEDULE  
TIME OIL NORTHWEST TERMINALTime and Materials Not to Exceed Bid Price

Item	Description of Items	Price
1	Mobilization and demobilization	
	Labor	\$ _____
	Equipment	\$ _____
	Materials	\$ _____
	Subtotal	\$ _____
2	Complete items assigned to contractor in stockpile management plan (Attachment 1)	
	Labor	\$ _____
	Equipment	\$ _____
	Materials	\$ _____
	Subtotal	\$ _____
3	Complete tasks 1 through 5 of drum removal scope of work (Attachment 2) <sup>(a)</sup>	
	Labor	\$ _____
	Equipment	\$ _____
	Materials	\$ _____
	Subtotal	\$ _____
4	Complete tasks 1 through 3 of small stockpile relocation scope of work (Attachment 2) <sup>(a)</sup>	
	Labor	\$ _____
	Equipment	\$ _____
	Materials	\$ _____
	Subtotal	\$ _____
5	Complete all additional items included in the scope of work but not included in the previous items	
	Labor	\$ _____
	Equipment	\$ _____
	Materials	\$ _____
	Subtotal	\$ _____
	Total	\$ _____

- 
- (a) For costing purposes, assume field activities for the drum removal and small stockpile relocation scope of work will each require 3 days to complete for a total of 6 days.

Time and Materials Unit Prices

Bidder shall provide the unit prices (in the form of a fee schedule) that were used by the bidder to develop the time and materials not to exceed bid prices stated above and that will be used to govern additions and deductions required during the course of the work resulting from owner-authorized changes in the project. Fee schedule shall include, at a minimum, all applicable labor classes; major equipment including temporary tank 1 and 2 rental rates, backhoe, dump truck, etc; Level C upgrade costs; and markup on rebillables (10 percent maximum).

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SEATTLE  
TACOMA  
PORTLAND  
STOCKTON  
RENO  
RICHMOND  
LOS ANGELES



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## TIME OIL CO.

2737 WEST COMMODORE WAY  
P.O. BOX 24447

SEATTLE, WA 98199-1233  
SEATTLE, WA 98124-0447

August 2, 1996

86-102(E) E.3

Ms. Karla Urbanowicz  
Oregon Dept. of Environmental Quality  
2020 SW Fourth Avenue, Suite 400  
Portland, OR 97201-4987

**RE: DRUM REMOVAL AND SMALL STOCKPILE RELOCATION PLAN  
TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON**

Dear Ms. Urbanowicz:

We received your letter of June 26, 1996 that contained DEQ's comments on our May 29, 1996 letter regarding planned drum removal and small stockpile relocation activities at the Time Oil Co. Northwest Terminal facility. These comments address the issues discussed at our July 24, 1996 meeting and provides our understanding of resolution of these issues. As requested in your comment letter, we have revised the plans to address your comments; the revised plan is attached for your consideration. The following responses briefly describe our approach to addressing your general and specific comments.

### RESPONSES TO GENERAL COMMENTS

1. The issue of an area of contamination (AOC) designation was discussed with you in our meeting of July 24, and will be addressed further in a letter to Barbara Puchy from Patty Dost of Schwabe Williamson & Wyatt. Therefore, the issue has not been addressed further in the work plan.
2. Please see our response below, under other RI issues, regarding further investigation in the eastern portion of the facility.
3. As discussed in our meeting of July 24, Time Oil does not concur with DEQ that interim measures to be taken to address the drum and the small soil stockpile warrant a press release or at least a stand-alone press release. We would like to discuss this issue further with DEQ if DEQ continues to want to issue a press release concerning interim measures.

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## RESPONSES TO SPECIFIC COMMENTS

1. A letter report describing the April 16, 1996 field reconnaissance and its results has been forwarded to you under separate cover (reference transmittal memo from Landau Associates dated August 2). The data from the field reconnaissance samples were evaluated to provide a preliminary characterization of the wastes expected to be generated during the drum removal and small stockpile relocation activities. This data was used to determine the methods of waste management described in the removal plan. Because pesticides have been determined to not have been used historically in the PCP mixing area, the field reconnaissance and the planned removal and relocation activities do not include evaluation of pesticides in soil.
2. DEQ's comments regarding equipment and personnel decontamination facilities have been addressed in the revised plan. Personnel decontamination areas will be located as specified in the site health and safety plans for environmental activities. These areas may change from day to day based on the particular site activity.

It is our experience that several different decontamination work pad designs provide acceptable performance in containing and collecting decontamination wash water and that most environmental service contractors typically maintain equipment and materials needed to construct and operate one or two such pads. We therefore prefer to allow the equipment and debris decontamination pad to be designed by the contractor subject to the criteria that the pad provide for containment, collection, and transfer of all decontamination water and that this design be included in a submittal to Time Oil's engineer for review and approval prior to pad construction. This approach allows the contractor to utilize existing materials and equipment, and therefore minimizes the cost of pad construction. Examples of acceptable pad designs include the synthetic liner decontamination pad discussed within Task 1 of the drum removal scope of work and the pad design shown on the attached Figure 1 which consists of metal grating placed over a steel sump. If DEQ requests, we would be pleased to submit the contractor's approved decontamination pad design submittal to you for your review.

3. Treated wastewater will be discharged to the POTW, and tank 38009 (or an equivalent tank) will be used as an interim accumulation tank. As such, it will be subject to the 90-day storage limitation, and will meet the applicable RCRA requirements for such tanks. It is not currently anticipated that tank 38009 will be used to treat wastewater. A copy of Time Oil's permit with the City of Portland to accept this wastewater will be provided under separate cover.
4. The revised plan addresses more specifically the planned waste characterization for drum contents. During the field reconnaissance, drum contents (solids or liquids) were sampled, where observed to provide information on waste management needs. On the basis of those results, it is anticipated that contaminated debris that cannot be successfully cleaned, drum contents, any white waxy material, and visually contaminated soil will be disposed as FC27 waste. Additional characterization will be conducted for acceptance of the waste at the disposal facility if required by that facility. It is our intent to manage the standing water with the other liquids. As noted in the revised plan, it is expected that some soil, including saturated sediment in areas of standing water, will need to be excavated from the drum

area. It is anticipated that the soil will be consolidated with the large stockpile, in a segregated area, similar to the manner in which the small stockpile will be handled. Soil not excavated will be included in the confirmation soil sampling that follows the removal activities. Blackberry brush will be set aside.

5. Further details regarding rinsing and cleaning of debris are provided in the revised plan. Debris management is based on the standards for hazardous debris [40 CFR 261.3(f) and 268.45]. Per these regulations, physical extraction (including a high pressure stream or water spray of "sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers to clean debris surface") of glass, metal, plastic, and rubber debris contaminated with F027 wastes is planned. Under the performance standards for the physical extraction technique, a "clean debris surface" is defined as:

The surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

Based on observations during the field reconnaissance, treatment of most of the debris to be encountered in the drum and small stockpile area should be possible using a hot water high pressure stream or water spray with detergents (e.g., Alconox), as needed, to remove any oily constituents. Per the hazardous debris regulations, additional testing of the debris following treatment will not be necessary as long as the performance standards are met. Debris meeting the treatment standards will be managed as solid waste. All debris that is not glass, metal, plastic, or rubber (e.g., wood, brick, etc.) will be segregated and disposed as F027 waste or washed and subsequently tested to determine whether or not it is a hazardous waste.

6. It is anticipated that F027 waste from the drum area and small stockpile area will be drummed (or over packed) and transported by Phillip Environmental to an incinerator facility permitted to take F027 waste.
7. Characterization data for the waxy solid debris are included in the field reconnaissance report.
8. The plan has been revised to provide additional details regarding confirmation soil sampling activities. It is anticipated that any residual soil contamination in the drum area will be removed soon after removal of the drums by scraping and removing the upper 2 to 4 inches soil with a backhoe. Soil confirmation sampling will be conducted both in areas where soil is excavated, and in outside excavation areas. It is expected that residual levels of soil contamination, if any, will be addressed in a future phases of the RI.

To evaluate whether contaminated soil has impacted groundwater, at least two shallow monitoring wells will be installed at or near the eastern property boundary following soil

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removal activities. The wells will be drilled and installed in conjunction with Phase II RI activities and according to the procedures described in the RI/FS work plan.

9. The degraded tarps consist of woven polyplastic. The original tarps were placed on the stockpile in 1991 when debris in the small stockpile area was first noticed. An additional tarp in good condition was placed over the degraded tarps in 1995.
10. Solid PCP is recognized by its characteristically uniform bead-like appearance. During the field reconnaissance, the solid PCP was generally observed in close proximity to discarded PCP bags. To the extent possible, the solid PCP will be removed using a shovel.
11. - The 90-day storage limitation has been explicitly noted in the revised work plan.
12. As revised in the work plan, dioxin analysis will be conducted on at least four confirmation samples, two from excavated areas and two from unexcavated areas.
13. The intent to segregate the small stockpile material from the large stockpile material was included in the original version of the plan. Soil excavated from the drum area or from the waxy debris area, or soil from the decontamination area, will also be consolidated with the large stockpile.
14. Establishing appropriate cleanup levels is currently planned as part of the Phase I/II EA and FS activities.
15. Several of the Kopper's PCP-containing wood preserving formulations produced at the former PCP mixing area included petroleum-based solvents (not chlorinated solvents); metals also were contained in several Kopper's products as pigments. The concentrations of these constituents observed in the field reconnaissance samples were likely resulting from these sources.

#### OTHER RI ISSUES:

- As part of the drum removal and small stockpile relocation activities, historical uses of the drum and small stockpile area will be researched. This will include reviews of historical aerial photos. A topographic survey of the area has already been conducted.
- Surface water systems will be identified through topographic mapping and visual site inspections; sensitive environmental areas will be evaluated during the Phase I EA.
- Additional investigation of soil surface contamination in the area is proposed as follows: prior to or concurrent with the drum removal activities, the eastern portion of the property will be walked to identify any visual signs of contamination (material or stains on the surface, distressed vegetation, etc.). If such signs are identified, visually contaminated soil and associated material, if present, will be removed and managed per Attachment 2, and the soil will be sampled. The results of this reconnaissance (and any removal and sampling) activity will be presented in the report documenting the drum

removal and small soil stockpile removal activities. Unless confirmation soil samples suggest a need for immediate action, any required further investigation of the eastern portion of the facility will be incorporated into a later phase of the RI/FS.

- Time Oil will not develop the site in a manner that would exacerbate existing contamination or prevent future investigation or remedial actions; however, identification of any contaminated soil does not necessarily have to occur prior to initiating development, especially if paving of the area is planned and/or risk of exposure is low.

As discussed with you previously, we would like to schedule the planned removal actions and confirmation sampling within the drum area and small stockpile locations to coincide with RI field activities and implementation of the large stockpile management plan, which currently are planned for early September. Please advise us as to whether this strategy is acceptable to DEQ.

We hope that the responses provided in this letter are satisfactory. We look forward to proceeding with drum removal and small stockpile relocation activities upon receipt of written approval from DEQ.

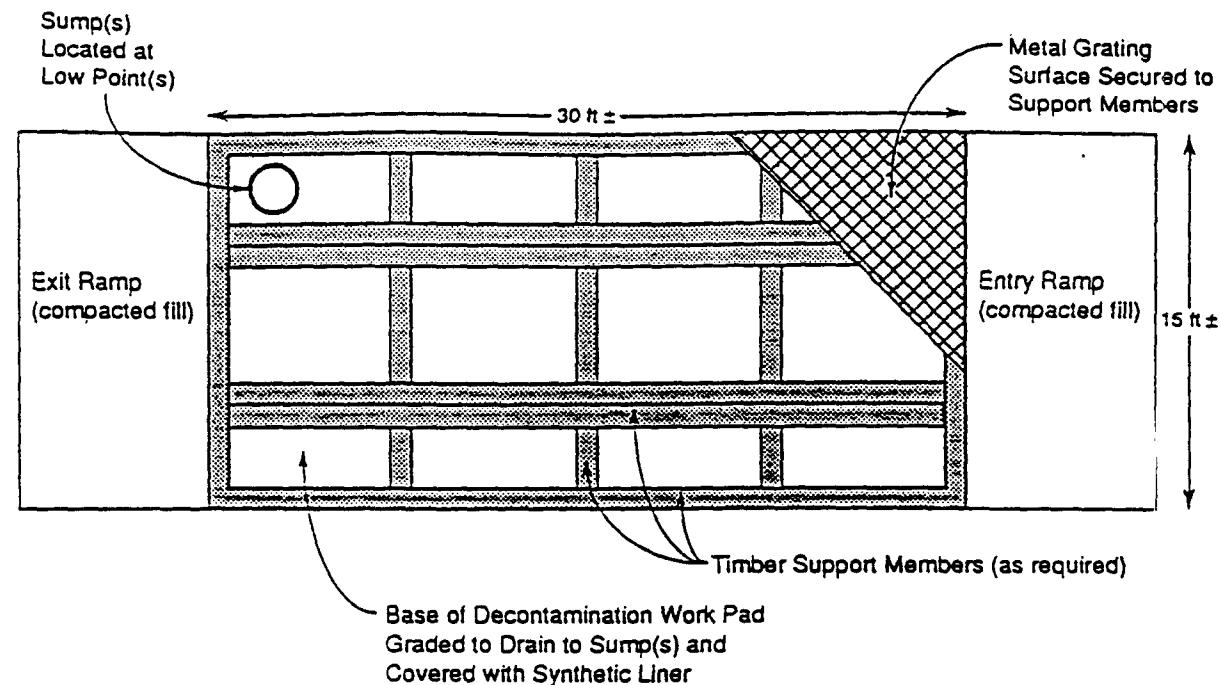
Sincerely,



Mr. Kevin Murphy  
Senior Environmental Specialist

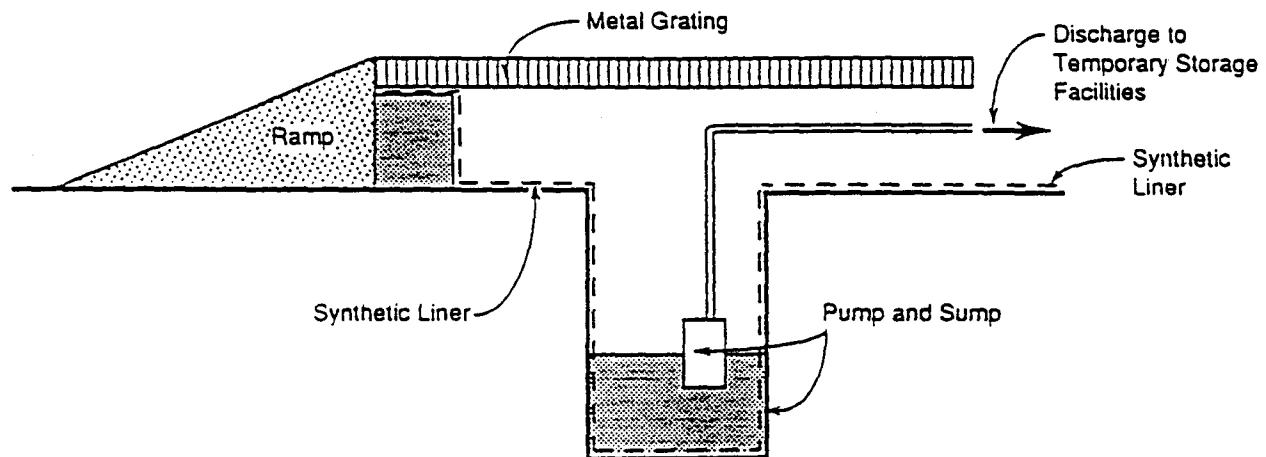
Attachments: Figure 1, Decontamination Work Pad Example Design

cc: Ms. Patricia Dost; Schwabe Williamson and Wyatt  
Ms. Leslee Conner; Landau Associates, Inc.



Plan View-Decontamination Work Pad  
*(Not to Scale)*

231001 60 T-1000 Terminal Drum Removal Response Letter Fig. 1 (W) D-96



Detail of Collection Sump and Liner  
*(Not to Scale)*

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Decontamination Work Pad Example Design

Figure 1

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**REVISED DESCRIPTION OF PLANNED ACTIVITIES FOR DRUM AREA AND SMALL STOCKPILE  
TIME OIL NORTHWEST TERMINAL  
PORTLAND, OREGON**

This document provides a revised description of activities that are planned by Time Oil Co. to address the small drum area and the small stockpile located in the eastern, undeveloped portion of Time Oil's Northwest Terminal in Portland. Attached to this document is a revised scope of work that has been developed to guide the remediation/construction contractor that Time Oil Co. will be hiring to conduct these activities.

Activities planned for the drum area and small stockpile were discussed in a meeting between Time Oil and DEQ representatives on May 2, 1996 and on July 24, 1996; the revisions in these documents reflect responses to DEQ's comments, received in a letter dated June 26, 1996 and discussions in the July 24 meeting. Time Oil hopes to remove these materials in conjunction with planned RI and stockpile management plan activities, and as part of its preparation to lease the easternmost portion of the terminal.

**BACKGROUND**

Twenty-seven drums have been observed in an undeveloped area northeast of the active Northwest Terminal facility. The drums are located in and near two small surface depressions within a crescent-shaped area of about 100 ft by 30 ft at the base of a topographic rise (Figure 1). Some of the drums were observed to be partly or completely submerged in standing water or partly buried in soil during a recent field reconnaissance. The condition of the drums varies from minimal corrosion to corroded with some holes; some drums are partially crushed. Residuals (solids and water) were observed in some of the drums during a recent field reconnaissance.

A small stockpile is located adjacent to the drum area. The stockpile is approximately 25 ft by 25 ft by 5 ft in size (about 50 yd<sup>3</sup> in volume) and is currently covered with a tarp and enclosed within a temporary fence. The small stockpile is located in an area reportedly used in the past for the accumulation of debris. Discarded bags originally containing PCP pellets are included with the stockpile material. The soil in the small stockpile will be consolidated with the large soil stockpile that is located just south of the former PCP mixing area.

In April 1996, a limited field reconnaissance was conducted in the drum area and in the small soil stockpile area to initially document and screen the types and levels of contaminants existing in each area. The purpose of this field reconnaissance was to obtain information on the chemical characteristics in both areas. This information was needed to identify the appropriate level of protection for the project health and safety plan and to better define the scope of the remediation/construction contractor's responsibilities. Evaluations of the analytical results indicate that drum residuals and locally spilled drum contents contain high levels of PCP, TPH, and metals, and, therefore, removal is advised.

**PLANNED FUTURE ACTIVITIES**

Time Oil plans to conduct removal activities within the drum area and small stockpile area. The planned activities to be conducted within these areas are discussed below.

### **Drum Area**

The objective of this task is to remove the drums from the undeveloped area and prepare them for disposal at the appropriate facility, remove obviously contaminated soil, and confirm effectiveness of the removal activities. The drum removal and associated activities will be conducted by Time Oil's remediation/construction contractor (contractor) with oversight by Landau Associates.

The contractor will be expected to conduct the following tasks for removal and appropriate disposal of the drums from the area:

- Set up a temporary decontamination area (see description in the contractor scope of work).
- Pump any standing water (including any water contained in ruptured drums) and transfer the water to existing storage tank 38009, which is located adjacent to the former PCP mixing area (or an equivalent tank). Tank 38009 is currently clean and lined, and has a total capacity of about 38,000 gallons.
- Remove the drums from the area using a backhoe or similar equipment; facilitate and assist with inspection of the drums for labels and contents.
- Remove any additional drums found in the immediate area with a backhoe or similar equipment.
- Dehead drums, remove any remaining contents, and place contents in 55-gallon drums.
- Overpack any full or partially full drums of suspect or known hazardous materials. If any of the drums contain measurable liquids or unidentifiable solid material, transfer this material into 55-gallon drums or overpack the drum for sampling and offsite disposal as a F027 waste.
- Decontaminate the drums in the decontamination area and prepare for transport and disposal of the drums at an appropriate facility. Based on knowledge of historical site uses, the field reconnaissance, and the one labeled drum, at least some of the drums contained wood-treatment products, including PCP. It is anticipated that some of the drums can be recycled (intact containers that are not ruptured and that retain at least 75 percent of their original volume). The decontamination procedure for such drums will be a triple-rinse (using a hot pressure wash and detergent as needed to clean any oil surfaces). Following decontamination, these drums will be disposed of at a local recycling facility. Those drums that cannot be recycled, and other metal, plastic, rubber, or glass debris, will be handled as hazardous debris and, whenever possible, treated per the requirements of 40 CFR 261.3(f) and 268.45 to allow disposal of the treated debris as nonhazardous waste. This will involve physical extraction via high pressure steam and water sprays and/or scrubbing to remove hazardous contaminants from the debris surfaces. Drums and other debris treated to the requirements specified in 40 CFR 261.3(f) and 268.45 (verification of adequate treatment will be made by Time Oil) will be subsequently managed as solid waste. If the drums or drum contents indicate that these procedures are not appropriate, or if other contaminants are determined to be present based on field observations, other decontamination and disposal options will be considered. Debris that is not metal, plastic, rubber, or glass (e.g., wood,

brick, etc.) either will be 1) segregated and pressure washed and tested to determine whether it can be managed as a solid waste, 2) or disposed of as a F027 waste.

- Transfer decontamination fluids to existing storage tank 38009, located adjacent to the former PCP mixing area. The decontamination fluids will be stored and treated in a wastewater treatment unit prior to discharge. Collect solid residuals from the decontamination area into lined 55-gallon drums for transfer to the large soil stockpile or into containers appropriate for transport and disposal of an F027 waste, as directed by Time Oil. If necessary, sorbents will be added to the containers to prevent free liquids.
- Collect waxy, solid debris (which contain elevated concentrations of PCP) from the ground surface in three isolated areas and place into containers appropriate for transport and disposal of an F027 waste. If necessary, sorbents will be added to the containers to prevent free liquids.
- Transport the decontaminated drums, any overpacks, and the containers of decontamination residuals, debris, and/or drum contents to a temporary, lined staging area (to be determined by Time Oil) or to Time Oil's existing covered storage area in the former PCP warehouse until the appropriate disposal option is determined/arranged. Secure and cover the drums, and any overpacks, per Time Oil instructions. As authorized by Time Oil, transport to the disposal facility.
- Excavate soil from the drum area, as requested by Time Oil. Transport the soil to the larger stockpile area, segregate the soil from the large stockpile using a polyplastic liner or other appropriate material.

Specific tasks to be conducted by Landau Associates in support of the drum removal activity will include:

- Document the field conditions observed during drum removal and any unexpected conditions that may arise during these activities.
- Search for any additional drums that may be buried in the immediate area using a metal detector.
- Assist Time Oil in identifying any actions that may be appropriate due to unexpected field conditions that would constitute a change in scope for the contractor.
- Provide consultation to Time Oil regarding appropriate decontamination procedures for the drums, appropriate action for drum contents and soil in the drum area, and Time Oil's preferences for waste staging.
- Collect a sample of water from storage tank 38009 prior to treatment and disposal.
- Collect soil samples to confirm the successful removal in the drum areas.

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### **Small Stockpile Area**

The objective of this task is to consolidate material from the small stockpile located in the undeveloped area northeast of the Time Oil terminal with the large soil stockpile located south of the former PCP mixing area for future remediation.

Relocation of the small stockpile and associated activities will be conducted by Time Oil's contractor with oversight by Landau Associates. The contractor will be expected to conduct the following tasks for relocation of the small stockpile to the large soil stockpile area south of the former PCP mixing area:

- - Prepare a temporary area for screening debris (>60 mm in size) from the soil in the small stockpile; construct the area to prevent the spread of any contaminated materials.
- Remove the temporary fence surrounding the stockpile, to the extent necessary to provide access by hand sorting.
- Remove the degraded tarps covering the stockpile, rinse as directed by Time Oil, and bundle for disposal.
- Remove solid PCP (i.e., pellets or crystals) from the stockpile, to the extent practicable, and place into 55-gallon drums or drum overpacks for disposal as a F027 waste.
- Screen out other debris, such as rocks, wood, metal, and trash from soil, first by hand sorting, followed by screening with a grizzly or similar equipment, for separate management. If appropriate, clean the metal, plastic, rubber, or glass debris using a hot-pressure washer in the established decontamination area. (Debris from this area will be cleaned and disposed in the same manner as debris removed from the drum area). Rinse water will be transferred to existing tank 38009; solid residuals will be placed in lined 55-gallon drums for transfer to the large soil stockpile or into a container suitable for transport and disposal of F027 waste, as directed by Time Oil. If necessary, sorbents will be added to the containers to prevent free liquids.
- Transport the screened soil and gravel debris to the large stockpile area and segregate from the large stockpile using a polyplastic liner or other appropriate material, if necessary, in consultation with Time Oil.
- Transport containers containing solid PCP and debris that cannot be decontaminated to a temporary, lined staging area (to be determined by Time Oil) or to Time Oil's existing covered storage area in the former PCP warehouse until the appropriate disposal option is determined/arranged. Decontaminated debris shall be placed in appropriate containers and placed in the temporary staging area prior to disposal as a solid waste. Secure and cover the containers as instructed by Time Oil. As authorized by Time Oil, transport to the disposal facility.

The treatment and disposal of containerized materials will be coordinated by Time Oil.

Specific tasks to be conducted by Landau Associates in support of the small soil stockpile relocation

will include:

- Document the field conditions observed during screening and stockpile relocation and any unexpected conditions that may arise during these activities
- Assist Time Oil in identifying any actions that may be appropriate due to unexpected field conditions (e.g., discovery of other hazardous materials) that would constitute a change in scope for the contractor.
- Provide consultation to Time Oil regarding the appropriate action for debris encountered when screening the soil and Time Oil's preferences for staging and disposal of the debris.
- Provide consultation to Time Oil regarding the appropriate location for placement of the screened soil.
- Collect soil samples to confirm successful removal in this area.

#### Confirmation Samples

Following completion of removal activities in the drum area and small stockpile area by the contractor, confirmation samples of the soil in these areas will be collected. These confirmation samples will be used to verify that removal activities have been successful. Confirmation samples will specifically be collected underlying the areas where the drums, the waxy solid debris, and the small soil stockpile were removed, where any soil excavation occurred, underlying the decontamination area, once removed, and from selected areas outside the excavated areas. The number of confirmation samples collected from each area will be based on a number that is statistically valid for evaluating the soil concentrations underlying the drum area and the small stockpile area for compliance with applicable cleanup levels. For estimation purposes, collection of 16 samples (plus one duplicate) is assumed, for a total of 17 samples (a minimum of five samples will be collected from each of the drum and the small stockpile areas and at least one sample will be collected from the decontamination area). A uniformly placed grid system will be established within each area, and one randomly located sample will be collected from the surface soil or from the base and sidewall of the excavation (0 to 6 inches below ground surface) within each grid.

Based on the field reconnaissance results and discussions with Time Oil, the confirmation samples will be analyzed for PCP, TPH-D, PAH, and PP metals. At least four samples (two from inside excavated areas and two from outside the excavation areas) will be analyzed for dioxins. The results of the confirmation sampling will be presented in a technical memorandum along with documentation of field activities related to the drum removal and small soil stockpile relocation and an evaluation of whether any additional action is necessary based on residual soil contamination levels.

Attachment: Contractor Scope of Work

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## CONTRACTOR SCOPE OF WORK

This scope of work provides a description of activities to be conducted by the contractor as part of a drum removal and small stockpile relocation at the Time Oil Northwest Terminal (the site) in the Rivergate area, Portland, Oregon. The contractor must provide all labor, equipment, and supplies necessary to perform the services described below.

### DRUM REMOVAL

Twenty-seven drums have been observed in an undeveloped area of the site. The drums are located in and near two small surface depressions (referred to as the north and south drum areas) within a crescent-shaped area of about 100 ft by 30 ft at the base of a crescent-shaped topographic rise. In April 1996 each drum area was observed to contain an estimated 2,000 to 3,000 gallons of standing surface water. At least 10 drums were completely submerged in standing water at that time, and others were partly submerged. Also, some of the drums are partly buried in soil. The condition of the drums varies from minimal corrosion with some holes to almost completely corroded; some drums were partially crushed. It is unknown whether additional drums are buried in these areas. The topography surrounding the drum areas and the hill is primarily flat, but some small debris piles exist near the drums. Vegetation in the area consists mainly of grasses, scrub brush, and blackberry vines.

Residuals (solids and water) were observed in some of the drums during a recent field reconnaissance. Samples of these residuals were collected and analyzed for various organic constituents and metals. The sample results indicate that pentachlorophenol (PCP) was detected at concentrations ranging from nondetect to 47 percent in residual solids collected from the drums, but was less than 1 part per million (ppm) in water sampled from the drums and from the standing water. Residuals from two of the drums contained elevated concentrations of metals (including lead, 4 to 19 percent; chromium, 150 to 50,000 ppm; arsenic, 70 to 150 ppm; thallium, 50 to 140 ppm; zinc, 50 to 4,200 ppm; and mercury, from less than 1 to 220 ppm) and total petroleum hydrocarbons (TPH) (undetected to 15 percent). Some of the drum water also contained elevated concentrations of metals (including lead, 0.01 to 12 ppm and chromium, 0.1 to 2 ppm), low to moderate concentrations of solvents (less than 1 to 4 ppm per detected constituent), and TPH (up to 360 ppm). A white, waxy substance also was observed during the field reconnaissance in three isolated areas adjacent to the south drum area. This substance was determined to be essentially 100 percent PCP.

The objective of the drum removal is to remove the drums and waxy substance (and obviously affected soil) from the undeveloped area, prepare the drums and hazardous substances for transport to the appropriate disposal facility in accordance with appropriate state and federal laws and regulations, and confirm effectiveness of the removal activities. It is anticipated that the field activities for the drum removal will take approximately 3 days. The drum removal may occur during the same week as the small soil stockpile relocation (see below). The contractor shall conduct the following tasks for removal and disposal of the drums. In the conduct of these tasks, contractor will consolidate waste materials subject to disposal as RCRA F027 hazardous waste so as to minimize the number of containers requiring storage, transport, and disposal.

#### TASK 1. DECONTAMINATION AREA PREPARATION

The contractor shall establish a temporary decontamination area for use during drum inspection, sampling, decontamination, overpacking, equipment cleaning and other activities related to drum disposal. Because the decontamination area also will be used for work related to the nearby small stockpile relocation (described below), the contractor shall locate it in an area convenient to both the drum removal and small stockpile relocation areas. Location of the temporary decontamination area is tentatively planned to be slightly west of the small soil stockpile where confirmation sampling will likely occur following removal of the decontamination area. The contractor shall prepare the decontamination area by performing the following activities:

- Upon arrival at the site, inspect existing site conditions to determine if the specified decontamination area location is appropriate for planned activities. The decontamination area shall be large enough to allow for simultaneous drum inspection, sampling, overpacking, and decontamination, if needed, and provide for decontamination of equipment used to remove and handle drums and debris. As directed by Time Oil, part of the decontamination area may be used for temporary drum storage after decontamination is complete.
- Construct a bermed decontamination pad using an appropriate synthetic liner that will withstand various decontamination activities without tearing and leaking and a sump to allow the collection of decontamination fluid and solid residuals. Construction of the pad includes appropriate subbase preparation using suitable onsite granular material or imported (by contractor) granular fill, and use of curtains or other barriers, as appropriate, to contain decontamination sprays. Alternative decontamination pad design may be approved by Time Oil.
- Provide a hot water pressure washer, water supply tank, and accessories for conducting decontamination activities. Water is available within ½ mile but not at the drum area.

- Provide pumps, vacuum truck, and other equipment necessary to collect, store, and/or transport decontamination fluids and solid residuals. Clean, 55-gallon drums will be supplied by Time Oil.

## TASK 2. DRUM AREA PREPARATION

As noted previously, some of the drums are submerged or partly submerged in standing water. The contractor shall remove the standing water before removing the drums. The contractor shall prepare the drum area before removal activities by conducting the following activities:

- Pump any standing water from the south (and possibly the north) drum areas using a vacuum truck (with a capacity of approximately 4,000 gallons) and transport the water to tank 38009 located adjacent to the former PCP mixing area (or an equivalent tank, as directed by Time Oil). The contractor shall arrange for rental and delivery of the vacuum truck prior to mobilizing to the site. The rate of seepage is uncertain, so the contractor shall maintain operation of the vacuum truck to keep the water level lowered while removing the drums and searching the area for additional drums. The contractor shall take appropriate measures to minimize the amount of sediment that is pumped with the water.
- Cut brush in the drum area and set aside to minimize hazards and to facilitate the search for additional (including buried) drums.

## TASK 3. DRUM AND RESIDUAL REMOVAL

The contractor shall perform the following activities in support of the drum removal and residual collection:

- Remove drums and transport them to the decontamination area. The contractor shall have available a variety of slings, cradles, or other types of devices to remove and transport the drums without spilling the contents and drum dolly or backhoe to transport drums that contain water. The contractor also shall have available temporary plugs for small holes to stop small leaks while handling, and oversized liners to contain leakage from the drums during transport between the drum removal area and the decontamination pad. (If it is necessary to dehead or overpack drums before moving, the contractor shall provide the necessary means to prevent contamination to the ground surface in the area where this activity occurs.) Heavy equipment shall not track or spill any contaminated material during transport onto other areas.
- Assist Time Oil and its consultant in searching the immediate area for additional buried drums, using a metal detector combined with hand shoveling and backhoe excavation. Provide the metal detector and appropriate hand tools to facilitate the drum search.
- Collect white, waxy solid residual from the ground surface in three isolated areas, and place it into containers appropriate for storage, transport, and disposal of a RCRA F027 waste. At Time Oil's direction, some of the underlying soil also may be removed from

these and other areas and placed into 55-gallon drums for transport to the large soil stockpile. The volume of identified, white, waxy solid on the surface is estimated to be about 7 ft<sup>3</sup> or less.

- Assist with confirmation soil sampling to be conducted by Time Oil and its consultants, as directed by Time Oil, potentially including digging of shallow test pits in the drum area with the backhoe.

#### TASK 4. DRUM DECONTAMINATION AND OVERPACKING

Most of the drums appear to be empty or filled with water and soil or sediment. Based on the field reconnaissance analytical results, at least some of the drums likely contained wood-treatment products, including PCP and one contained thick, oily sludge. It is anticipated that some of the drums can be recycled; the appropriate decontamination procedure for such drums will be a triple rinse, using a hot pressure wash and detergent, if necessary, to clean oily surfaces and that the cleaned drums will be disposed at a local recycling facility. Those drums that cannot be recycled, and other metal, plastic, rubber, or glass debris will be handled as hazardous debris and, whenever possible, treated per the requirements of 40 CFR 261.3(f) and 268.45 to allow disposal of the treated debris as solid waste. This will involve physical extraction via high pressure steam and water sprays and/or scrubbing to remove hazardous contaminants from the debris surfaces. Drums and other debris treated to the requirements specified in 40 CFR 261.3(f) and 268.45 (verification of adequate treatment will be made by Time Oil) will be subsequently managed as solid waste. Debris that is not metal, plastic, rubber, or glass (e.g., wood, brick, etc.) will be segregated and either pressure washed and tested to determine whether it can be classified as a nonhazardous waste, or disposed of as a F027 waste.

A limited number of drums may need to be overpacked for disposal. To accomplish this task, the contractor shall:

- Dehead drums, remove any remaining contents (may require scraping), and place the contents into drum overpacks or other containers appropriate for storing, transporting, and disposing a RCRA F027 waste. If any of the drums contain residuals (solids or liquids) that require additional characterization, transfer this material into separate, clean, 55-gallon drums or into DOT-approved drum overpacks for sampling and offsite disposal. Use sorbents as necessary to prevent free liquids.
- Rinse the emptied, recyclable drums using a hot pressure washer and detergent if necessary to clean oily surfaces, to remove contents, scale, and residual solids. Move the decontaminated drums to a temporary lined storage area, as directed by Time Oil. Secure and cover the decontaminated drums and transport them to the appropriate drum recycling facility.

- Overpack any full or partially full drums containing solid PCP, or other known or suspected hazardous materials (as directed by Time Oil). Move the overpacks and drums containing residuals to Time Oil's existing covered storage area, in the former PCP warehouse, until the appropriate disposal option is determined.
- Decontaminate nonrecyclable drums and other metal, plastic, rubber, or glass debris using a high pressure steam or water spray (with detergent as needed to clean oily surfaces), and scrubbing, as appropriate, to produce a surface free of all visible contaminated soil and hazardous waste (per 40 CFR 268.45). Flatten the decontaminated debris to the extent possible, and place in containers appropriate for the storage and disposal as solid waste. Upon approval by Time Oil, transfer the containers to the appropriate disposal facility.
- Transfer decontamination fluids to existing tank 38009. Collect solid residuals from the decontamination area into a lined 55-gallon drum for transfer to the large soil stockpile, or into containers appropriate for the storage, transport, and disposal of a RCRA F027 hazardous waste, as directed by Time Oil. Label all containers as appropriate for their contents and transport the containers to a temporary, lined staging area (to be determined by Time Oil) or to the covered storage area in the former PCP warehouse, or to the large soil stockpile, as directed by Time Oil.

#### TASK 5. DEMOBILIZATION

The contractor shall remove and place the decontamination area liner and other waste materials into 55-gallon drums or other appropriate waste containers when the work is completed or as instructed by Time Oil. Contractor-owned equipment and debris, trash, or other material generated by the contractor, Time Oil, and its consultants shall be removed from the site at the completion of work. Contractor shall be responsible for proper disposal of these materials.

#### SMALL STOCKPILE RELOCATION

A small stockpile is located southeast of the south drum area. The stockpile is approximately 25 ft by 25 ft by 5 ft in size (about 50 yd<sup>3</sup> in volume) and is covered with a tarp and enclosed within a temporary fence. The small stockpile is located in an area reportedly used in the past for the accumulation of debris. Discarded bags originally containing PCP pellets (or prills) are included with the stockpile material. Wood, metal, and other debris also are included with the stockpile material; some of the debris has been burnt.

Analytical results for soil samples collected from the small stockpile during the field reconnaissance confirmed the presence of PCP (from 200 to 800 ppm), polycyclic aromatic hydrocarbons

(less than 1 to 250 ppm for individual constituents), TPH (100 ppm as oil to 900 ppm as diesel), and metals (including lead, 150 to 780 ppm; copper, 34 to 91 ppm; chromium, 22 to 37 ppm).

The objective of this task is to consolidate soil from the small stockpile with a large soil stockpile located about ½ mile to the southwest. It is anticipated that the field activities for the small stockpile relocation will take no more than 3 days; these activities may be conducted during the same week as the drum removal. The contractor will conduct the following tasks for relocation of the small stockpile. In the conduct of these tasks, contractor will consolidate waste materials subject to disposal as RCRA F027 hazardous waste so as to minimize the number of containers requiring storage, transport, and disposal.

#### TASK 1. SMALL STOCKPILE PREPARATION

The small soil stockpile contains miscellaneous debris, including bags that once contained PCP, mixed with a silty sand. Before relocating the small stockpile materials, the contractor shall segregate bags and debris (material >60 mm in size) from the soil to the extent possible. To accomplish the small stockpile preparation, the contractor shall conduct the following:

- Prepare a temporary area for screening debris from the soil in the small stockpile; the area shall be constructed to prevent the spread of any contaminated material. Locate the temporary area in a known contaminated area where soil excavation or confirmation sampling will occur, or protect the ground surface so that contamination from the small stockpile materials will not be transferred to uncontaminated soil.
- Set up a grizzly or similar screening unit, with a 0.5- to 1-inch screen in the temporary screening area.
- Remove the temporary chain link fence surrounding the small stockpile as needed to provide access, and cut the brush around the edges of the pile and set aside.
- Remove degraded tarps covering the pile, decontaminate the tarps, if possible, otherwise remove as much soil as possible from the tarps, and bundle tightly. Place the bundle in 55-gallon drums or appropriate containers for disposal, or manage as otherwise directed by Time Oil.
- Re-cover the pile with the existing temporary cover and the screened material with a new temporary cover at night and during adverse weather conditions to prevent transport of material by wind or precipitation. The existing cover dimensions are 24 ft by 36 ft.

## TASK 2. SOIL SORTING AND SCREENING

To remove the larger debris from the small stockpile and segregate the material containing PCP pellets and bags, the pile will be hand sorted and then mechanically screened. To accomplish this task, the contractor shall conduct the following:

- Remove solid PCP (e.g., pellets or prills) from the stockpile, to the extent practicable, by sorting through the pile using hand tools. Discard the solid PCP, PCP bags, and soil that could not be separated from the solid PCP into drum overpacks or other containers appropriate for storage, transport, and disposal of a RCRA F027 hazardous waste. The amount of PCP material that will result from this sorting is unknown but is estimated to be at least 1 yd<sup>3</sup> (4 or 5 drums).
- Screen out other debris, such as rocks, wood, metal, and trash from the soil first by using hand tools, followed by screening with a 0.5- to 1-inch grizzly, or similar equipment, for separate disposal. If the soil is too difficult to screen to this size, Time Oil may instruct the contractor to install a coarser-sized screen (e.g., 1.5-inch). Segregate gravel from debris of nongeologic origin to the extent possible. Provide appropriate measures to control the generation of air-borne dust.
- Decontaminate metal, plastic, rubber, and glass debris using a using a high pressure steam or water washer (with detergent as needed to clean oil surfaces) at the established decontamination area to produce a surface free of all visible contaminated soil and hazardous waste (per 40 CFR 268.45). Flatten the decontaminated debris to the extent possible, and place in containers appropriate for the storage and disposal of solid waste. Upon approval by Time Oil, transfer the containers to the appropriate disposal facility, or place the decontaminated debris into a temporary staging area, as directed by Time Oil, for eventual disposal as a solid waste. Transfer the decontamination rinse water to existing tank 38009. Collect solid residuals from the decontamination area into lined, 55-gallon drums for transfer to the large soil stockpile or into drum overpacks or other containers appropriate for storage, transport, and disposal of a RCRA F027 hazardous waste, as directed by Time Oil. For other debris (i.e., wood, brick, etc.), rinse using a high pressure steam or water washer for subsequent sampling, or place the debris into drum overpacks or other containers appropriate for storage, transport, and disposal as a RCRA F027 hazardous waste, as directed by Time Oil.
- Transport overpacks and other containers holding solid PCP and debris that cannot be decontaminated to Time Oil's existing covered storage area for temporary storage. Decontaminated debris shall be placed in appropriate containers and placed in the temporary staging area. Secure and cover the container(s) as instructed by Time Oil.

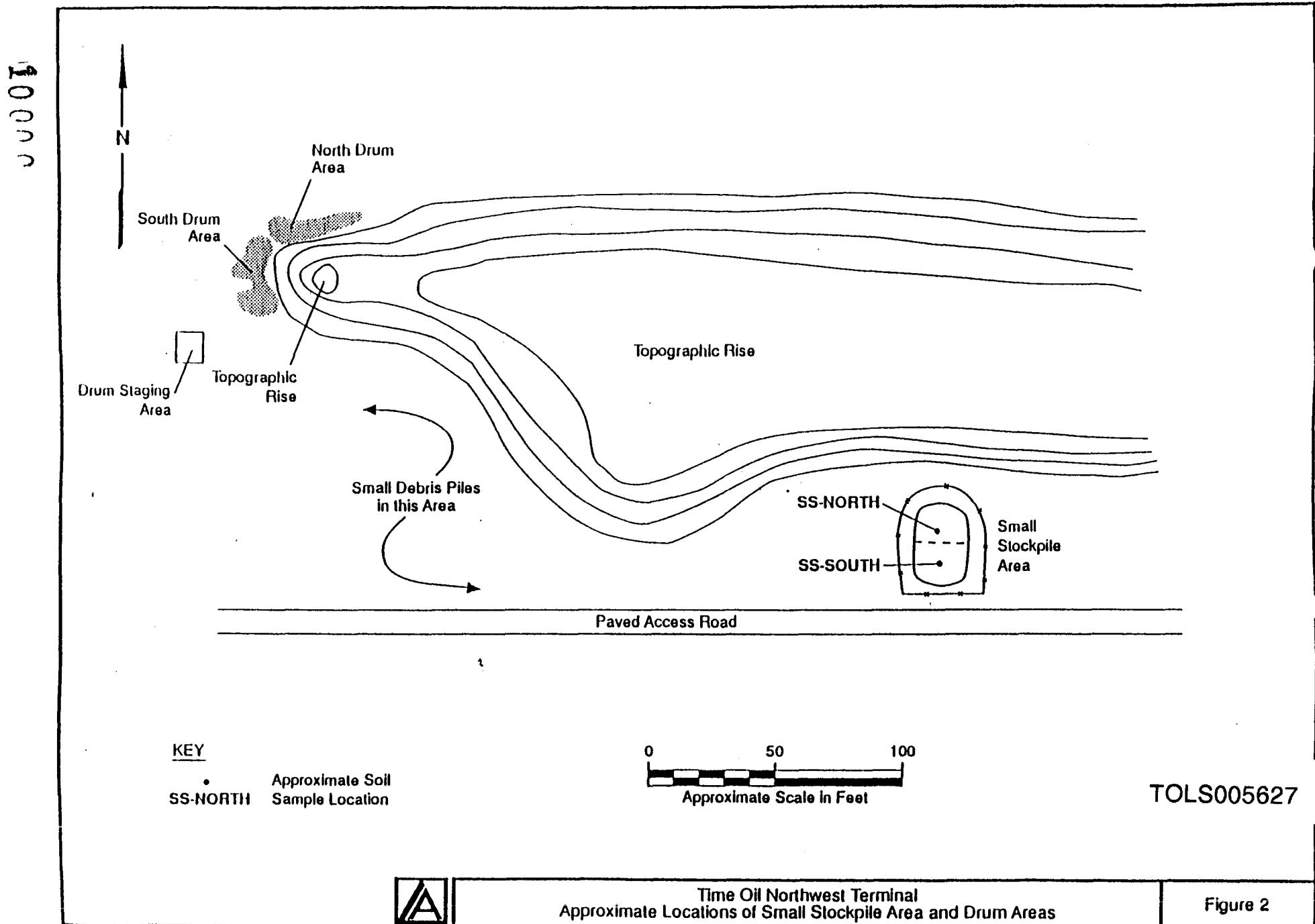
### TASK 3. SOIL RELOCATION

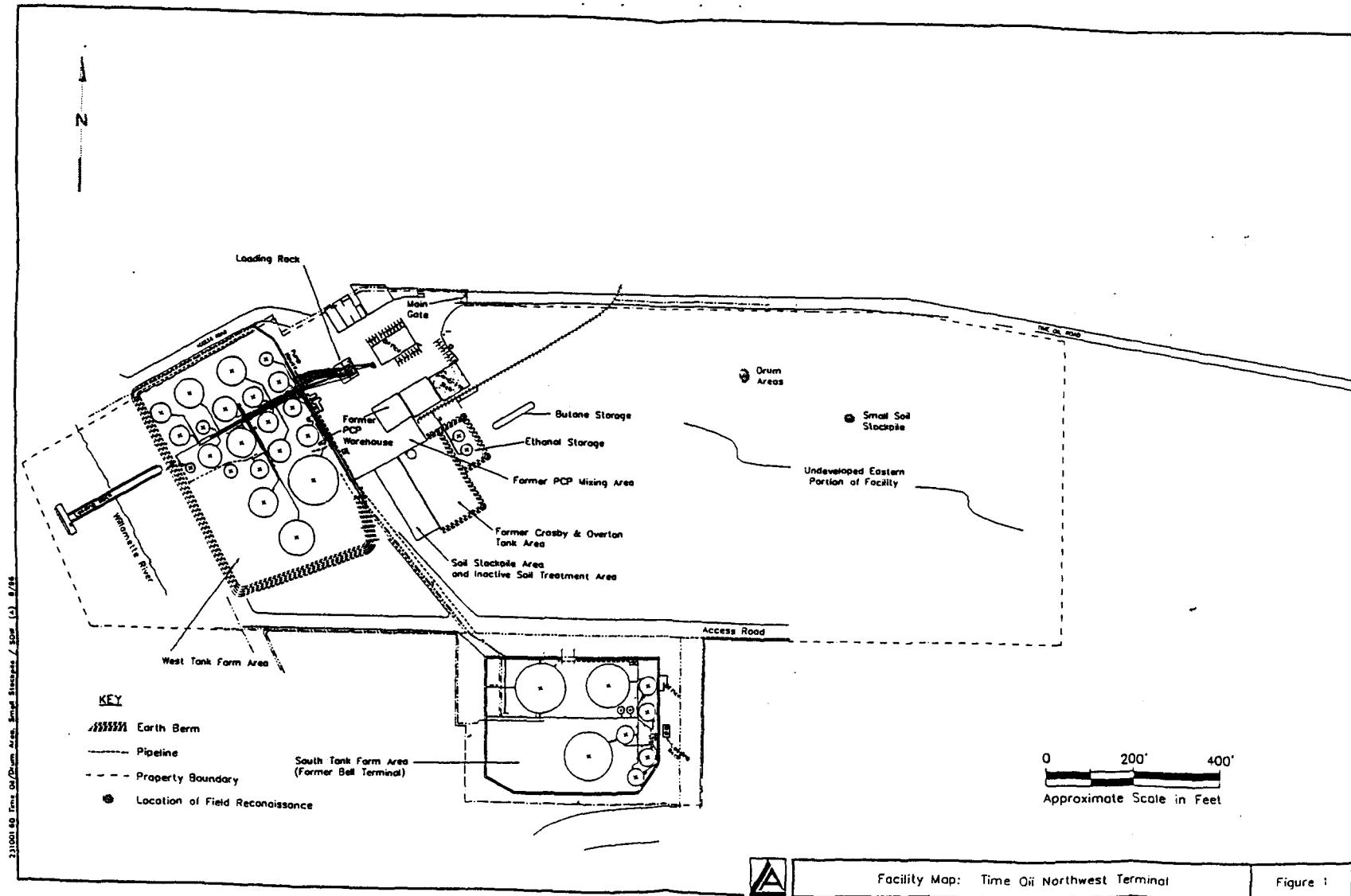
After the debris from the small stockpile has been segregated, the contractor shall transport the screened soil over contiguous Time Oil-owned property and add it to the large stockpile. To accomplish this, the contractor shall conduct the following:

- Remove the cover (12 mil fabric-reinforced HPDE) from part of the large soil stockpile and remove part of the chain link fence to provide access, as directed by Time Oil.
- Transport the soil and any segregated gravel and decontamination solids to the large stockpile area (but segregate from the large stockpile using a polyplastic cover, if necessary), in consultation with Time Oil. To minimize the spilling of soil in transit, cover the soil with plastic during the relocation activities.
- Re-cover the large stockpile and replace the chain link fence.
- Decontaminate any potentially contaminated equipment at the decontamination area using the high pressure washer. Transfer decontamination fluids to existing tank 38009. Collect solid residuals from the decontamination area into containers for transport and consolidation with the large stockpile or into containers appropriate for the storage, transport, and disposal of a RCRA F027 hazardous waste. Transport the drums to a temporary lined staging area or to covered storage area in the former PCP warehouse.
- Assist with any confirmation soil sampling conducted by Time Oil and its consultant, potentially including digging shallow test pits in the small stockpile area with a backhoe.

### HEALTH AND SAFETY PLAN

The contractor shall prepare a project-specific health and safety plan, or the contractor may elect to adopt the health and safety plan of Time Oil's consultant (Landau Associates). The Landau Associates health and safety plan will be made available to the contractor for reference when the contract is awarded. The contractor's health and safety plan should provide information on safety rules and procedures (including personnel decontamination protocols), requirements for personal safety equipment, site monitoring and action levels, and emergency response. The contractor shall be responsible for providing their own personal protective equipment (PPE) and that of Time Oil and its consultant and properly disposing of it upon project completion. The contractor also shall provide all personal decontamination supplies, including provisions for boot wash and all other supplies required by the contractor's health and safety plan (e.g., health and safety monitoring equipment).





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LANDAU  
ASSOCIATES,  
INC.

Environmental and Geotechnical Services

86-102(E)E-3

**TRANSMITTAL**

To: Time Oil Co.  
2737 W. Commodore Way  
Seattle, WA 98199-1233  
Attn: Mr. Kevin Murphy  
RE: Northwest Terminal  
Portland, Oregon

Date: August 2, 1996  
Project No.: 231001.60

Copies	Description
1	Revised Health and Safety Plan for the upcoming environmental activities at the Northwest Terminal
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Kevin:

For your files. The plan was updated to address the additional work in the eastern portion of the facility, and to incorporate the chemical results from the April 1996 field reconnaissance work.

LANDAU ASSOCIATES, INC.

By: \_\_\_\_\_

Leslee L. Conner

10000

(lc)

cc: **[Redacted]** Sally Dose, Schwabe Williamson & Wyatt

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**Health and Safety Plan**

**Time Oil Northwest Terminal Facility  
Portland, Oregon**

April 16, 1996  
Revised August 1, 1996

Prepared for

**Time Oil Co.  
2737 West Commodore Way  
Seattle, WA 98199-1233**

Prepared by



TOLS005630

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TOLS005633

## 1.0 INTRODUCTION

This health and safety plan presents the protocols that will be required to provide for worker health and safety during environmental activities to be conducted at Time Oil Co.'s (Time Oil) Northwest Terminal in Portland, Oregon. This plan presents a description of known existing site conditions and the project health and safety organization, and also includes safety rules and procedures; criteria for hazard and risk analysis; description of levels of personal protection and required equipment; air monitoring procedures; emergency response information; training requirements; and requirements for routine health care and health monitoring.

The requirements outlined in this plan are considered the minimum health and safety requirements due to potential site contamination. All fieldwork will be performed in accordance with Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.120, which regulates hazardous waste site operations; as well as Oregon requirements outlined in the Oregon Administrative Rules (OAR 437). This plan does not address physical worker safety issues that may be associated with excavation, trenching, and shoring (OAR 437-03, Subdivision P) or work in confined spaces (OAR 437-02, Subdivision E).

### 1.1 SITE BACKGROUND

The Northwest Terminal facility is currently used for petroleum products handling and storage, and is bounded to the north, east, and south by heavy industrial complexes of Portland's Rivergate area and the Port of Portland, and to the west by the Willamette River. Within the facility, which covers approximately 52 acres, are several areas distinguished by their current and/or historical uses (Figure C-1). These include the following:

- Former pentachlorophenol mixing area where specialty wood treating products containing pentachlorophenol (PCP) in various formulations were blended and stored for offsite shipment. The former PCP mixing area is located in the approximate center of the facility, and includes the former PCP warehouse; the area south of the warehouse (formerly occupied by various mixing and storage tanks and currently empty); a stockpile of approximately 3,000 yd<sup>3</sup> of soil that was excavated from the area south of the warehouse in 1989 and placed on a liner and under a cover in an area adjacent to the southwest corner of the excavated area, and an inactive soil treatment area just south of the soil stockpile. Releases of PCP, carriers, additives, and the resultant formulations occurred to soil in the former mixing area, and those chemicals are suspected to exist today in the stockpiled soil, as well as in unexcavated soil in the former PCP mixing area. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.

- Former Crosby & Overton tank area, in which waste oils were stored in two aboveground storage tanks. The tanks have been removed from this area, which is adjacent to the south side of the former PCP mixing area. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.
- Active west bulk product tank farm area where various petroleum products are stored. This bulk product terminal area is located in the western portion of the facility, adjacent to the Willamette River. Gasoline, diesel, ethanol, and other petroleum products are stored in 21 aboveground storage tanks ranging from 5,000 to 80,000 gallons in size. In 1979 there was a documented spill of diesel within the tank farm, and in 1994, there was a spill of unleaded gasoline in the tank farm. Because it is an active tank farm, health and safety issues include not only chemical exposure and physical hazards, but explosive hazards as well. The Northwest Terminal tank farm is covered by this health and safety plan.
- Loading rack where petroleum products are transferred from the Northwest Terminal tank farm to trucks. The loading rack is located just west of the office. A spill of ethanol occurred in this area, and subsequent remedial actions included spill containment and recovery on the ground surface, and pumping and treating ethanol-affected groundwater from well M. No environmental investigations of the loading rack are planned; however, investigations relating to other areas of the facility may include intrusive activities in this area and, therefore, this health and safety plan addresses this area.
- Active south tank farm area (former Bell terminal) located in the southwestern portion of the facility. Petroleum products are stored in ten aboveground storage tanks and one underground storage tank. No environmental investigations are anticipated in this area; therefore, this area is not covered by this health and safety plan.
- Inactive and currently undeveloped eastern portion of the facility. Observations indicate that drums, some of which contained PCP or PCP formulations, and empty bags that originally contained solid PCP are mixed with soil in discrete areas of this portion of the facility. Intrusive environmental investigations are anticipated in this area; therefore, this area is covered by this health and safety plan.
- Entrance, office, and equipment maintenance area located in the northwestern portion of the facility. There are no environmental activities planned in this area; therefore, this health and safety plan does not cover this area.
- Butane and ethanol storage area and loading rack located to the southeast of the office area. No intrusive environmental activities are planned in this area; therefore, this area is not covered by this health and safety plan.

The purposes of the planned environmental activities are to collect sufficient data to characterize the nature and extent of contamination that remains at the site, to consolidate

contaminated material that may exist in the eastern portion of the facility with similar material in other areas, and to verify the removal of contaminated material in those areas where removal activities take place. Field investigations covered by this health and safety plan may include:

- Sampling and analyzing soil in and adjacent to areas previously reported to be contaminated with PCP and other carrier compounds, PCBs or TPH, or where previous site activities suggest the potential for such contamination
- Installing monitoring wells and sampling and analyzing groundwater in areas downgradient of previously identified soil or groundwater contamination and/or where previous hydrogeologic characterization is considered insufficient
- Abandoning existing wells which are damaged
- Overseeing removal and decontamination of drums and debris, and excavation of soil which may be contaminated with PCP and possibly associated carrier chemicals, TPH, and metals
- Measuring groundwater levels to evaluate flow directions and piezometric head gradients
- Conducting aquifer tests (slug and pumping) in selected monitoring wells to evaluate aquifer properties and potential contaminant migration pathways
- Modifications to existing stormwater controls, including installation of sumps and regrading of stockpiled soil.

This health and safety plan does not cover site activities that are limited to walking across any exclusion zone designated in this plan if the activities noted above are not in progress in that exclusion zone, and if the activities in progress in any other designated exclusion zone do not represent a reasonable risk of exposure.

PCP and petroleum-related chemicals are expected to be the most frequently encountered constituents of concern at the site. Table C-1 lists these and other potential constituents of concern, with their maximum previously detected concentrations (if known) and health-based exposure information. It should be noted that the symptoms listed as a result of exposure are generally associated with acute (short term) exposures to high concentrations of a constituent. Such symptoms may not be associated with the lower level exposure that would be the most likely exposure scenario encountered during site work. Lack of these symptoms does not indicate that exposure is not occurring. Also, symptoms of exposure are not available for some of the constituents. Therefore, use of prescribed protective equipment and monitoring instruments in

accordance with this plan is required in order for exposure to these constituents to be kept as low as possible.

## 1.2 HEALTH AND SAFETY PLAN APPLICABILITY AND ADHERENCE

All individuals present onsite in areas where environmental activities are being conducted must read, understand, and comply with this health and safety plan. All field participants must read the plan prior to undertaking field activities. If any information presented in this plan is unclear, the reader should contact the site safety officer for clarification prior to participating in any field activity. Once the information has been read and understood, the individual must sign the Acknowledgment (Table C-2), which will then be placed in the job file.

All subcontractors for Landau Associates must prepare their own health and safety plan that is at least as protective as this plan, or they may adopt this plan as their own. Failure to comply with the requirements of this plan are grounds for immediate work suspension/dismissal. Copies of an acknowledgment form similar to that provided as Table C-2 must be provided to Landau Associates' site health and safety officer before the commencement of field activities.

This plan is flexible, and allows unanticipated site-specific problems to be addressed. The plan may be modified at any time, based on the judgment of the respective site safety officer or the project safety officer, as follows:

- Minor changes to the plan with regard to day-to-day activities (e.g., location of decontamination station, etc.) may be made by the site safety officer
- Substantive changes to procedures (e.g., monitoring frequency, etc.) must receive the concurrence of both the site safety officer and the project safety officer.

Any modifications to the plan will be documented using Table C-3 (Modification to Health and Safety Plan) and will be presented to the onsite team during a safety briefing.

Activities conducted as part of this investigation shall be conducted without creating health and safety risks for nearby workers or the public. All onsite personnel shall be attentive to the potential for release of contaminated materials associated with field activities and shall immediately bring all such matters to the attention of the appropriate site safety officer. Decontamination procedures and other elements of the field procedures (e.g., access to/from work areas by heavy equipment) have been developed to be protective of both worker and public health and safety.

### **1.3 RESPONSIBLE INDIVIDUALS**

Safety during the field investigations will be the responsibility of the Landau Associates' project manager and the designated site safety officer. The site safety officer, or designee, will be present at the site at all times during field activities related to the investigation.

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## **2.0 SITE ORGANIZATION AND OPERATION**

The areas of the site to be investigated and the type of activities involved in the investigation are diverse. Additionally, the distribution of contamination at the site is nonuniform in nature. These factors preclude the use of a single work zone boundary.

Figure C-2 provides a general indication of the layout for each work area. However, actual boundaries may vary slightly with work activity requirements, and will be clearly delineated once defined. The work zones shown on Figure C-2 are described in more detail below.

### **2.1 WORK ZONES**

Each work area will consist of an exclusion zone, a contamination reduction zone, and a support zone:

- **Exclusion Zone:** The outer perimeter of each work area defines the outer perimeter of the exclusion zone for that work area. Only authorized field personnel will be allowed in each exclusion zone. The initial level of protection required in the exclusion zone may be adjusted as conditions change. Levels of protection are discussed in more detail in Section 5.
- **Contamination Reduction Zone:** All personnel and equipment will leave the exclusion zone through a contamination reduction zone. Both personnel and equipment decontamination will occur in this zone to prevent the transfer of contaminants to the support zone (decontamination procedures are specified in Section 3.2.3). The transition from the exclusion zone to the contamination reduction zone is shown schematically on Figure C-2.
- **Support Zone:** Located adjacent to the contamination reduction zone, the support zone is where all personnel will suit up in specified personal protective equipment before entering the work area defined by the exclusion zone. The support zone includes clean equipment storage and personnel resting and eating facilities.

Each zone in each work area will be established on an activity-by-activity basis prior to initiation of work and will be clearly delineated (marked by tape or fencing).

### **2.2 SITE SECURITY**

Most of the area in which field activities will occur is a restricted-access industrial area. For work activities that are conducted in areas with public access, the work area will be blocked off and posted.

## **3.0 SAFETY RULES AND PROCEDURES**

Safety is the responsibility of every individual involved in project efforts. Whether in the office or in the field, properly followed procedures are essential for personal safety and to minimize injuries or accidents involving equipment. Potential hazards while working at the site include, but are not limited:

- Exposure to toxic and/or hazardous chemicals
- Physical hazards from use of drilling, sampling, and testing equipment
- Physical hazards from heavy equipment
- Physical hazards from working conditions (e.g., heat stress, hypothermia).

### **3.1 SAFETY RULES**

All personnel working in the field will follow the rules and procedures listed below:

- All personnel will conduct themselves in a professional manner at all times.
- No personnel will be admitted into an operational exclusion zone without safety equipment in proper working condition and requisite training.
- All personnel must comply with the established safety procedures. Anyone working onsite for Landau Associates who does not comply with this health and safety plan may be immediately dismissed from the site. Anyone working under contract with Landau Associates at Time Oil who does not comply with a health and safety plan at least as stringent as this health and safety plan may be immediately dismissed from the site.
- Working while under the influence of intoxicants, narcotics, or controlled substances is prohibited. Prescription drugs should not be taken by personnel if the potential for contact with toxic substances exists, unless approved in writing by a physician.
- Firearms, ammunition, fireworks, and explosives are prohibited.
- Climbing or standing on machinery (other than drill rigs or service trucks) or equipment is prohibited unless authorized by the site safety officer.
- Long hair must be contained inside a hard hat. Facial hair that interferes with proper operation and fit of respiratory protection gear is not allowed.
- A team system will be used within an exclusion zone. During site operations, each worker is a safety backup for his/her team partners and should make all personnel aware of dangerous situations that may develop.

- Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in an exclusion zone.
- Smoking or consumption of food and beverages is allowed only within designated areas in the support zones.
- Disposable clothing will be used whenever necessary and appropriate to minimize the risk of cross contamination.
- The number of personnel and the amount of equipment in contaminated areas will be minimized to allow for efficient site operations.
- Samples will be collected only by trained and authorized personnel.
- Unnecessary and unprotected contact with contaminated or potentially contaminated material will be avoided. Efforts will be made to stage site activity upwind of investigative equipment, activities, and materials.
- Proper decontamination procedures will be followed before leaving an exclusion zone and the site, unless medical emergencies dictate otherwise (Section 3.2.3). All decontamination residual materials, and any other potentially contaminated materials, will be handled properly and kept onsite or at a designated secure area.
- Only approved work clothes or equipment will be allowed within the exclusion zones.
- Exchange of personal protective equipment will not be allowed.

## 3.2 SAFETY PROCEDURES

The following safety procedures should be followed by personnel involved in environmental activities covered by this health and safety plan.

### 3.2.1 LEAVING THE SUPPORT ZONE TO ENTER WORK AREAS

- Before beginning investigation activities, review all site information updates. These updates will be provided by the site safety officer as necessary to provide new information concerning:
  - Expected hazards
  - Special conditions
  - Sampling procedures
  - Location of phones

- Emergency medical information
- Level of personal protection required
- Finish eating and extinguish smoking materials prior to suiting up.
- Attend safety briefing and worker question and answer period, as applicable.
- Check safety gear and equipment. Suit up as required to begin activities.
- Measure and delineate exclusion zone (unless established previously).

### **3.2.2 ACTIVITIES IN EXCLUSION ZONE**

- All activities will be conducted at a minimum of Level D (modified) as described in Section 5.
- For activities capable of creating volatile airborne contamination, levels of personal protection will be adjusted according to results of work zone air monitoring (Section 6).
- Whenever possible, personnel will be stationed upwind of field activities capable of creating airborne contamination.
- If any physical discomfort is experienced (e.g., abnormalities, nausea, lightheadedness), immediately stop work, tell the other team members, and leave the area.
- If any personal protective equipment fails, immediately leave the area.
- One person must never be left alone in an exclusion zone.
- Use maximum care in handling samples. If the sampling site is not accessible using gear available (i.e., water too high, slippery or steeply sloped surface, holes, etc.), confer with the Landau Associates' project manager and/or site safety officer, as appropriate, to arrange an alternate sampling site or appropriate equipment/procedures to obtain samples safely.
- Immediately wipe off spills and dirt from sampling containers.

### **3.2.3 WORK AREA EXIT DECONTAMINATION**

All personnel and equipment must be properly decontaminated, as described below, before entering a support zone from an exclusion zone. All contaminated equipment and materials will leave only through the contamination reduction zone or will be contained onsite; any potentially contaminated materials will be kept in designated, secure locations.

### **3.2.3.1 Routine Decontamination Procedures**

A decontamination area will be set up in the contamination reduction zone at the border of each exclusion zone. Prior to leaving the exclusion zone:

- Portable sampling equipment which has some direct contact with contaminated materials will be washed or placed in/on plastic for transport to equipment decontamination area
- Drilling rig auger flights will be placed on a trailer for transport to the decontamination area or will be decontaminated on a portable trailer, designed for that purpose
- Drill cuttings will be brushed and/or washed off the drill rig before moving the rig to the decontamination area, to reduce the transport of potentially contaminated materials from the exclusion zone.

In the contaminant reduction zone, sampling, drilling, and other equipment will be decontaminated as follows:

- Sampling equipment will be decontaminated as outlined in the work plan.
- All heavy equipment must be decontaminated before leaving an exclusion zone, with particular care taken in decontaminating those parts of the heavy equipment that have come in direct contact with contaminants, such as tracks, tires, shovels, grapples, and scoops. High-pressure hot water cleaning will be used for these, aided by physical scrubbing with disposable brushes when necessary to loosen caked materials. All portions of the equipment, including the undercarriage, chassis, and cab, will also be inspected and cleaned as necessary.
- Any vehicle used for transportation in an exclusion zone will be equipped with seat covers that can be easily wiped down. All such vehicles must be decontaminated prior to leaving the exclusion zone. Decontamination will include, at a minimum, high pressure washing of the exterior and, as necessary, wet wiping the interior and scrubbing of the exterior.
- After sampling, drilling, or other equipment is properly decontaminated, personal protective equipment will be removed and washed and/or containerized prior to leaving the contaminant reduction zone.

Certain parts of contaminated respirators, such as the harness assembly or cloth components, are difficult to decontaminate. If grossly contaminated, they will be discarded. Rubber components will be soaked in soap and water and scrubbed with a brush. Respirators will be sanitized by rinsing in a detergent solution followed by a clear rinse, then hung to dry.

### **3.2.3.2 Emergency Decontamination**

In case of an emergency, personal decontamination procedures will be speedily implemented if possible. If a life-threatening injury occurs and the injured person cannot undergo decontamination procedures without incurring additional injuries or risk, he or she will be transported wrapped in plastic sheeting if time allows and if consistent with the injury. The medical facility will be: 1) informed that the injured person has not been decontaminated, and 2) given information regarding the most probable contaminants.

### **3.2.4 DISPOSAL OF CONTAMINATED FLUIDS AND MATERIALS**

All equipment and materials used for decontamination or personal protection will be cleaned or collected for appropriate disposal. All nondisposable equipment will be decontaminated onsite. Disposables will be containerized. Contaminated liquids will be collected in storage tanks or containers and temporarily stored in a secure location. Storage and/or disposal will be conducted in accordance with the RI/FS work plan and any amendments.

### **3.2.5 HOUSEKEEPING**

Work areas will be kept as clean and orderly as possible at all times. Ordinary refuse will be placed in suitable rubbish bins or trash containers at the site. The storage or introduction of extraneous materials will be minimized in the exclusion zone to minimize the decontamination load and reduce possibilities for cross contamination.

### **3.2.6 VISITORS**

Authorized visitors will only be allowed to observe operations from the support zone or beyond, and must obey all instructions of the site safety officer and/or Time Oil's representative. Representatives from the Oregon Department of Environmental Quality (DEQ), the Oregon Occupational Safety and Health Division, and U.S. Environmental Protection Agency (EPA) must also possess appropriate health and safety equipment at the time of the visit, and follow a health and safety plan at least as stringent as this plan, or adopt this plan as their own.

## **4.0 ANALYSIS OF SITE HAZARDS AND RISKS**

### **4.1 BASIS FOR ANALYSIS**

Results of previous investigations within the Northwest Terminal have identified the presence of contaminants of concern. Maximum concentrations of constituents detected in soil, groundwater, and other media at the site are summarized in Table C-1 along with occupational exposure criteria, as available, and potential exposure pathways of concern.

The planned activities will involve physical hazards inherent with working outside and in the presence of heavy equipment. In addition, activities conducted within the vicinity of active bulk storage involve explosive hazards.

### **4.2 SUSPECTED HAZARDOUS SUBSTANCES**

There is a potential for field personnel to become exposed to contaminants in the defined work areas. Dermal, inhalation, and incidental ingestion exposures are possible. The general risk of exposure on the site is low to moderate, but may be high in individual work areas.

Current site contamination could lead to dermal contact during intrusive activities, such as excavation, drilling, drum removal, and soil or groundwater sampling. Dermal protection, as defined in Section 5.2, will, therefore, be required for all such activities. Volatilization or dust suspension of certain site contaminants could pose risk of inhalation exposures. Action levels and the associated respiratory protection for potential inhalation exposures will be based initially on constituent concentrations presented in Table C-1 and will be adjusted thereafter based on ambient monitoring data to be collected during field activities (Section 6).

## 5.0 PERSONAL SAFETY EQUIPMENT

### 5.1 LEVELS OF PROTECTION

Levels of protection have been defined as follows by the EPA in their *Standard Operating Guide* (EPA 1984):

- Level A requires a fully encapsulating suit and full face piece, positive pressure, self-contained breathing apparatus (SCBA) with a 5-minute, supplied air escape pack for the highest level of respiratory, skin, and eye protection. Level A is not anticipated at this site and, therefore, is not discussed further.
- Level B requires maximum respiratory protection through the use of supplied air or a positive pressure SCBA. A 5-minute, supplied air escape pack is required while in Level B. Dermal protection is selected on the basis of anticipated hazards. Level B is not anticipated at this site, and therefore, is not discussed further.
- Level C requires an air purifying respirator that is specific to the contaminants of concern. The degree of dermal protection depends on anticipated hazards.
- Level D is the basic work uniform, modified for work at this site, as described in Section 5.2.

There are numerous variations and modifications possible with each level of protection. Personal protection action levels for site environmental activities are discussed in Section 6.

### 5.2 REQUIRED EQUIPMENT

The level of protection designated for environmental activities defines the level of protection that should be initially used; subsequent air monitoring results may indicate that a downgrading (or upgrading) in the level of protection is allowable and appropriate. Level C protection is initially recommended for intrusive work (drilling, digging, or otherwise disturbing soil, accessing monitoring wells for water level measurements or sampling, etc.) only. Level D (modified) is considered appropriate for nonintrusive activities unless air monitoring indicates that an upgrade is necessary. The following sections define Level C and Level D (modified) protective equipment. As noted previously, these levels of protection are not required for site activities that are limited to walking across any exclusion zone designated in this plan if the RI activities are not in progress in that exclusion zone, and if the activities in progress in any other designated exclusion zone do not represent a reasonable risk of exposure.

### **5.2.1 LEVEL D (MODIFIED)**

Level D (modified) protection consists of the following personal safety equipment:

- One-piece disposable Tyvek coveralls, which are resistant to PCP, will be used. Coveralls will be taped at wrists and ankles if wet or excessively dusty conditions are expected.
- PVC inner-disposable gloves.
- Neoprene and/or nitrile outer gloves.
- Neoprene, chemically resistant, impermeable outer boots with steel toes and shanks.
- Hard hat (with splash shield if liquid splashes or sprays are likely to be encountered); not required when groundwater monitoring is the only activity occurring in the exclusion zone.
- Safety glasses with side shields (for intrusive work and groundwater sampling only).

In work areas initially designated as Level C, Level D (modified) personal safety equipment may only be worn after the site safety officer has made a determination that exposure to hazardous materials will not approach the threshold limit value/permissible exposure level (TLV/PEL).

### **5.2.2 LEVEL C**

Level C protection consists of the following personal safety equipment:

- All Level D (modified) equipment described above (including all equipment identified for intrusive work)
- Half-face air purifying respirator equipped with organic vapor/HEPA cartridges. If contaminated liquid splashes or sprays are likely to be encountered, full-face air purifying respirators equipped with organic vapor/HEPA cartridges shall be used.

## 6.0 SITE MONITORING AND ACTION LEVELS

Air monitoring (including the use of specific air monitoring equipment and visual observations) is required to determine the effectiveness of the engineering controls, to re-evaluate levels of protection, and determine if site conditions have changed. Air monitoring will be conducted at the beginning of the work shift and periodically during the progress of the work, as described. Air monitoring will be conducted during the course of all activities within the work zone, including cleaning, excavation, and decontamination of equipment.

The following procedures will be followed to accomplish air monitoring appropriate for the activities addressed in this health and safety plan:

- Each piece of monitoring equipment will be inspected before work start-up. Failure of any of the health and safety equipment required by this plan must be reported to the site health and safety officer immediately. Work in the exclusion zone is not to continue beyond the monitoring cycle if the monitoring equipment is not working properly.
- Before initially entering the work area, air monitoring will be conducted at the boundary of the work area (approximately 35 ft upwind) and proceed inward to verify or adjust the level of protection needed for the planned activities. This initial monitoring will be conducted in Level C, with full face respirator. Thereafter, air monitoring will be conducted as described below to verify the appropriate level of respiratory protection (action levels are provided in Table C-4). The personal protective equipment requirements established through the monitoring program will apply to the area within a 30-ft radius of where the monitoring is conducted.

### 6.1 VOLATILE ORGANIC COMPOUNDS

Substances that are most hazardous from a chronic inhalation standpoint are those that are relatively volatile, highly toxic (i.e., low TLV or PEL) and have an odor threshold much higher than the TLV. If a substance has an odor threshold higher than the TLV, it is considered to have poor warning properties because its odor would not be detected until after the acceptable airborne concentration (TLV or PEL) has been exceeded. The designated site safety officer will have a photoionization detector (PID, such as a MicroTIP meter) onsite at all times when intrusive activities are conducted and will establish background volatile organic compound concentrations well upwind of any excavation, spoils pile, or borehole. PID readings will be taken periodically (at a minimum, every  $\frac{1}{2}$  hour) during all intrusive work within each exclusion zone, and at least once during decontamination activities in the contaminant reduction zone. A table showing the relative

response of the PID to different chemical constituents at different lamp energies will be kept with each instrument for field reference. The PID will be calibrated before each day's activity according to manufacturer's instruction. Calibrations will be recorded with the span gas in a log book dedicated to that instrument. Recalibration will be conducted periodically, as the instrument is sensitive to dust. In addition to PID monitoring, constituent-specific detector tubes (e.g., Draeger tubes) may be required to clarify the level of protection necessary during site environmental activities. Action levels for volatile organic compounds are discussed below and are summarized in Table C-4.

#### 6.1.1 ACTION LEVELS OUTSIDE ACTIVE TANK FARM AREAS

The organic vapor action level for field activities outside the active tank farm area is 10 ppm, based on toluene. The PEL for toluene is 50 ppm, and the action level is set below the PEL to account for other constituents which may be present. While monitoring with the PID, *any consistent readings in the breathing zone that are greater than 5 ppm above the upwind background level for more than 5 minutes, or any readings in the breathing zone greater than 10 ppm other than a momentary peak* shall be the action level for donning half-face air purifying respirators equipped with organic vapor/particulate cartridges. Cartridges will be replaced either immediately upon any indication of breakthrough or after each day of use.

*Any readings consistently greater than 10 ppm above background or greater than 50 ppm other than for a brief peak, or any peak reading greater than 100 ppm in the breathing zone,* will be the action level for exiting the area.

#### 6.1.2 ACTION LEVELS WITHIN ACTIVE TANK FARM AREAS

Benzene has the lowest PEL (1 ppm) for any of the volatile contaminants expected at the site. The action level for allowing downgrading of the level of respiratory protection within active tank farm areas will be based on benzene. Action levels are provided in Table C-4.

Note that *any readings consistently greater than 50 ppm other than for a brief peak, or any peak reading greater than 250 ppm in the breathing zone,* will be the action level for exiting the area.

When conducting intrusive activities within the active tank farm area, a dosimeter badge will be worn in the breathing zone over one typical 8-hour work shift by one employee expected to experience the most representative benzene exposure. The badge will be submitted to the

laboratory for analysis with the soil samples (care should be taken to package the dosimeter so that there is no cross-media transfer from the soil samples).

## 6.2 NONVOLATILE COMPOUNDS IN AIRBORNE DUST

A number of contaminants that pose potential risks due to inhalation via contaminated airborne dust have been identified onsite. The potential for airborne dust containing these constituents will depend on site conditions at the time of the environmental activities (primarily the moisture content of the soil) and the nature of the activities. If the soil is well watered and the wind is calm, the potential for dust suspension is greatly lowered.

Of the identified constituents, the greatest risk due to airborne dust is provided by PCP, which is found in varying concentrations across the site. The designated site safety officer will make a determination before commencement of daily activities, and at other times during hot and windy weather, as to the potential for unacceptable levels of airborne dust. If the site safety officer determines that the potential is low (e.g., the soil is moist or non-dusty and/or activities pose a low dust generation potential), no action is required (a modified Level D level of protection will be used). If the site safety officer judges that the potential is moderate to high (e.g., soil is in a dry and dusty condition or intrusive activities pose a high dust generation potential), then half face air purifying respirators equipped with organic vapor/particulate cartridges will be worn. In the event of visible blowing dust, operations will cease and personnel will leave the area until such time as site air conditions improve.

As an alternate, the site safety officer can use a real-time dust monitoring instrument (e.g., MiniRam) to determine the actions required. With a reading of less than  $4 \mu\text{g}/\text{m}^3$ , modified Level D is sufficiently protective. If the monitor reads greater than  $4 \mu\text{g}/\text{m}^3$  but less than  $50 \mu\text{g}/\text{m}^3$ , then protective equipment will be upgraded to Level C. Above  $50 \mu\text{g}/\text{m}^3$ , operations will cease and personnel will leave the area until site air conditions improve.

## 6.3 EXPLOSIVE CONDITIONS

In the active tank farm area, before initiating work activities and during intrusive activities, the potential for explosive conditions will be monitored using a combustible gas indicator (CGI) and an oxygen meter with the alarm set to auditory. The CGI will be calibrated before each day's activities according to manufacturer's instructions. Prior to all drilling and other intrusive activities at least every  $\frac{1}{2}$  hour thereafter, CGI and oxygen meter readings will be monitored and recorded

in the field notes. If odor, taste, or discomfort is detected by any employee, or if any of the action levels noted in Table C-4 are exceeded, monitoring is to be done continuously. If explosive conditions are identified at any time, work activities will cease and the area will be evacuated. Re-entry will only be allowed following progressive monitoring inward from the boundary of the work area that indicates that explosive conditions have been mitigated. Mitigation measures may include use of fans to dissipate vapors.

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## 7.0 EMERGENCY RESPONSE

### 7.1 REPORTING/NOTIFICATION PROCEDURES

In the case of any emergency, the site safety officer will be notified immediately. If the situation is life threatening and notification of the site safety officer would delay emergency response, field personnel may initiate the appropriate emergency contacts prior to notifying the site safety officer. The site safety officer will then initiate contacts as follows:

1. Call appropriate emergency services numbers (ambulance, fire, etc.) if not already done and provide the following information:
  - Name and location of person reporting
  - Location of accident/incident
  - Name and affiliation of injured party
  - Description of injuries
  - Status of medical aid effort
  - Details of any chemicals involved
  - Summary of the accident, including the suspected cause and the time it occurred
  - Temporary control measures taken to minimize further risk.

Note: This information is not to be released under any circumstances to parties other than the site safety officer, project safety officer, Landau Associates project manager, Time Oil, and bona fide emergency response team members.

2. Call the Landau Associates' project manager and the Time Oil representative (Table C-5) and provide information noted in item 1 above.

The site safety officer will complete a written accident/incident report using Table C-6, within 24 hours, sending copies to each of the project managers.

Resources to be used in cases of emergency include:

- List of Emergency Contacts: Table C-5 includes both the appropriate emergency services (top of table) and the appropriate project contacts (bottom of table).

- Nearest Phone: As of the date of this plan, telephones are located at the Time Oil Co. site office (see Figure C-1).
- Onsite Emergency Equipment: An industrial first aid kit, a 20-pound type ABC portable fire extinguisher, and an eyewash kit will accompany each field vehicle.
- Offsite Emergency Services: Phone numbers for offsite emergency services are listed in Table C-5. Copies of this table will be located in each vehicle. After the required emergency contacts are made, Time Oil and Landau Associates' project managers should be promptly notified by the site safety officer.
- Hospital Route: Good Samaritan Hospital is located near the site and should be utilized where care beyond standard first aid is required. Figure C-3 shows the route to the hospital. Onsite field personnel should become familiar with this route prior to field activities. Driving time from the site to Good Samaritan Hospital is estimated to be about 15 to 20 minutes, depending on traffic conditions.

## 7.2 NON-LIFE THREATENING EMERGENCIES

### 7.2.1 INJURIES

In emergency situations which are not life threatening (e.g., a broken leg), normal decontamination procedures should be followed when possible. However, decontamination procedures may be modified according to the specific circumstances. Outer protective clothing should be removed if doing so would not cause delays or aggravate the injury. Respirators should only be removed: 1) if the victim has stopped breathing, or 2) after the victim has been removed from a breathing hazard area.

Bodily injuries which occur as a result of an accident during operations at the site will be handled in the following manner:

- The victim will be administered to by an individual who holds current first aid and/or CPR certification, as necessary
- The local first aid squad/rescue unit and the local hospital (Good Samaritan Hospital, Portland) will be notified as appropriate, depending on the nature of the emergency.

### 7.2.2 HEAT STRESS

Heat stress can occur at any time when protective clothing is worn. Workers wearing semipermeable or impermeable encapsulating clothing should be monitored for heat stress through regular checks of heart rate and by more comprehensive monitoring when the temperature in the work area is above 55 to 60°F. A pulse rate in excess of 150 beats per minute may indicate heat

exhaustion, although this rate will vary among workers. All personnel shall know what their baseline pulse rate is before working in elevated temperatures, so as to monitor themselves. The site safety officer will be trained in monitoring, treating, and recognizing the signs of heat stress. If heat stress occurs, decontamination should be minimized and treatment begun immediately, unless the victim is obviously contaminated.

#### 7.2.3 COLD STRESS

Fieldwork may be conducted during the winter months, when site personnel may be subject to low temperatures, rain, and winds. In these conditions, field teams must be prepared to wear proper protective clothing and to recognize symptoms of cold stress.

Cold stress can be manifested as both hypothermia and frostbite:

- Hypothermia is a cold-induced decrease in the core body temperature that can increase the safety hazards associated with investigation activities that require maximum attentiveness and manual dexterity. Hypothermia produces shivering, numbness, drowsiness, muscular weakness, and, if severe enough, death.
- Frostbite results from the constriction of blood vessels in the extremities, decreasing the supply of warming blood to these areas. This drop in blood supply may result in the formation of ice crystals in the tissues, causing tissue damage. The symptoms of frostbite are white or grayish skin, blisters, or numbness.

Site personnel should review the information provided in their first aid training for response to cold stress problems.

#### 7.2.4 FLU-LIKE SYMPTOMS

Any site personnel experiencing flu-like symptoms should notify the site safety officer. Such symptoms may be sufficient cause for ceasing operations until the work area is evaluated and a "return to operations" order given by the site safety officer.

### 7.3 FIRE

Fire extinguishers (ABC-type) will be kept in each vehicle and drilling rig. This equipment will be used only to respond to small fires. In the event of major fires, explosions, or fire/explosion hazard conditions, all personnel will immediately evacuate the area. The site safety officer will evaluate the need for further evacuation and/or emergency services.

## **7.4 SITE EVALUATION AND EVACUATION**

The site safety officer will be responsible for determining if circumstances exist which require further evaluation and/or site evacuation. The site safety officer should always assume worst-case conditions until proven otherwise. Specific evacuation procedures and warning signs and signals will be covered in the health and safety training session prior to beginning work.

Two levels of evacuation may be considered:

- Withdrawal from the immediate work area onsite
- Evacuation of the surrounding area.

These are discussed further below.

### **7.4.1 WITHDRAWAL FROM WORK AREA**

Withdrawal to a safe upwind location will be required under the following circumstances:

- Detection of volatile organics and/or toxic gases at concentrations above action levels for the level of protection being worn (Section 6)
- Occurrence of a minor accident—field operations may resume after first aid and decontamination procedures have been administered
- Malfunction or failure of protective equipment, clothing, or respirator.

The following hand signals will be used by site personnel to communication within the work zone if respiratory protection is being used:

- Thumbs up - okay
- Thumbs down - not okay
- Hands on wrist - exit exclusion zone
- Hands on throat - cannot breath.

### **7.4.2 EVACUATION OF SURROUNDING AREA**

There are no reasonably foreseeable conditions, based on current knowledge of the site, that would require evacuation of the surrounding area. The site coordinators, in consultation with the site safety officer and, as appropriate, the Landau Associates' project manager, will be responsible for determining if circumstances exist for area-wide evacuation, and should always assume

reasonable worst-case conditions until proven otherwise. Fire and police departments must be contacted in such cases. If evacuation is necessary, it will be implemented with the assistance of the appropriate emergency response personnel (Table C-5).

Procedures for reporting accidents/incidents are provided in Section 7.1. They will be performed in the order indicated.

## **8.0 TRAINING**

All personnel performing onsite investigation tasks shall have completed formal health and safety training, which complies with 29 CFR 1910.120 and Oregon Administrative Rule (OAR) Chapter 437 (certificates of successful completion of training will be maintained in job files), and shall verify on-the-job training for those tasks they are assigned to perform. At least one member of each field team will be trained in CPR and first aid. All planned activities will be reviewed with the field personnel by the site safety officer and unfamiliar operations will be rehearsed prior to performing the actual procedures.

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## **9.0 ROUTINE HEALTH CARE AND MONITORING**

All persons working in an exclusion zone must have a medical evaluation to determine their baseline medical status prior to any site work. Follow-up examinations are appropriate if exposures are known or suspected to have occurred. Documentation of medical evaluations for all field personnel will be maintained by the site safety officer.

## 10.0 REFERENCES

ACGIH. 1992. *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, 1991-1992.* American Council of Governmental Industrial Hygienists, Cincinnati, OH.

American Conference of Governmental Industrial Hygienists. 1992. *Threshold Limit Values and Biological Exposures Indices for 1992-1993.*

EPA. 1989. *Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins (CDDs) and -Dibenzofurans (DCFs) and 1989 update.* U.S. Environmental Protection Agency, EPA/625/3-89/016. March.

EPA. 1984. *Standard Operating Safety Guides.* U.S. Environmental Protection Agency, Environmental Response Branch, Hazardous Response Support Division, November.

OSHA. 1991. *Air Contaminants - Permissible Exposure Limits.* Title 29 Code of Federal Regulations, Part 1910.1000. Occupational Safety and Health Administration.

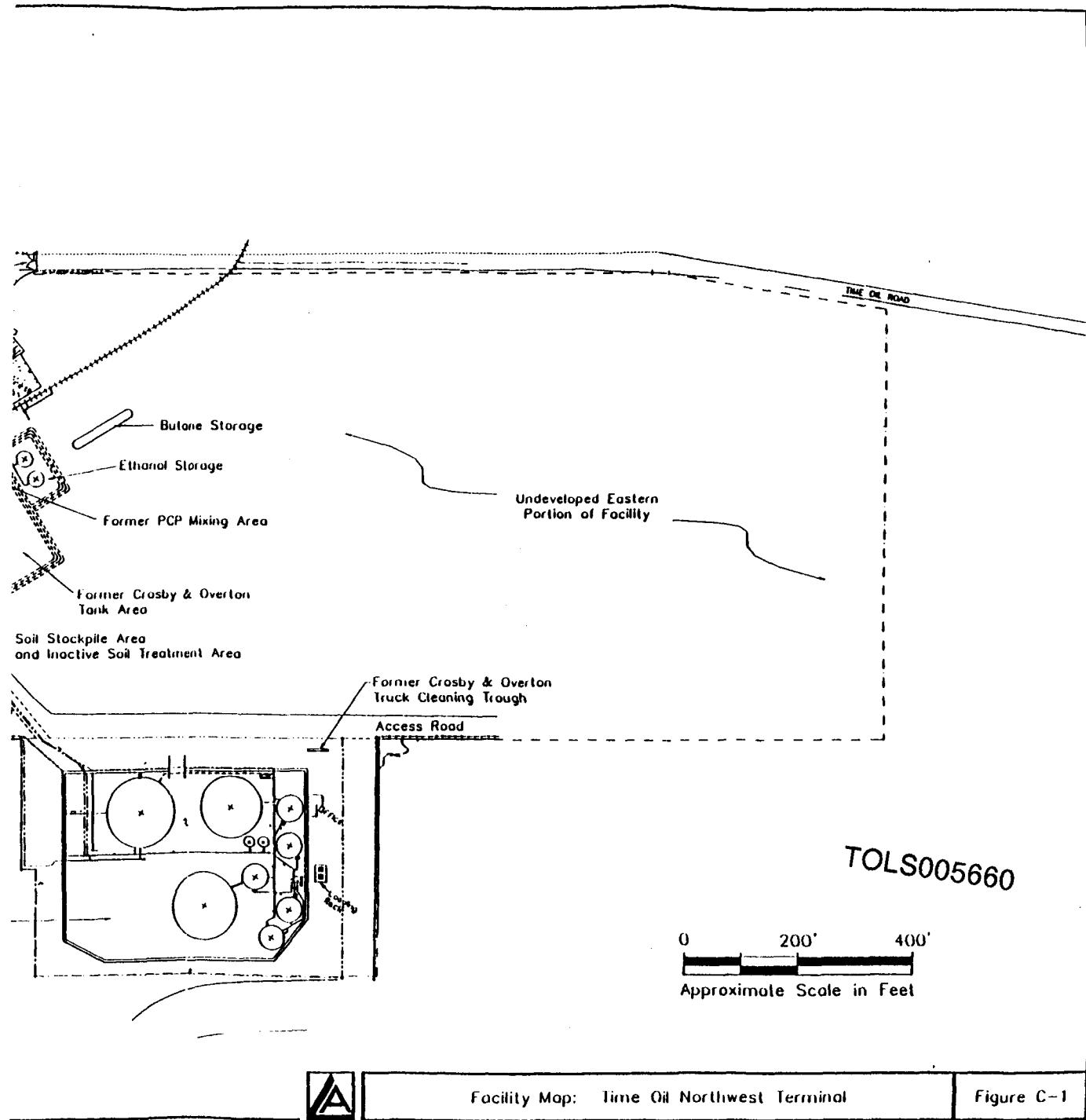
Oregon, State of. 1990. *Toxic and Hazardous Substances: Air Contaminants (1910.1000).* Oregon Administrative Rules (OAR) 437-02, Subdivision Z. Department of Insurance and Finance, Oregon Occupational Safety and Health Division.

U.S. Department of Health and Human Services. 1990. *NIOSH Pocket Guide to Chemical Hazards.*

U.S. Department of Health and Human Services. 1985. *Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities.* Public Health Service, Centers of Disease Control, National Institute for Occupational Safety and Health, October.

U.S. Department of Labor, Occupational Safety and Health Administration. 1989. *Hazardous Waste Operations and Emergency Response.* Final Rule Federal Register 29 CFR Part 1910.

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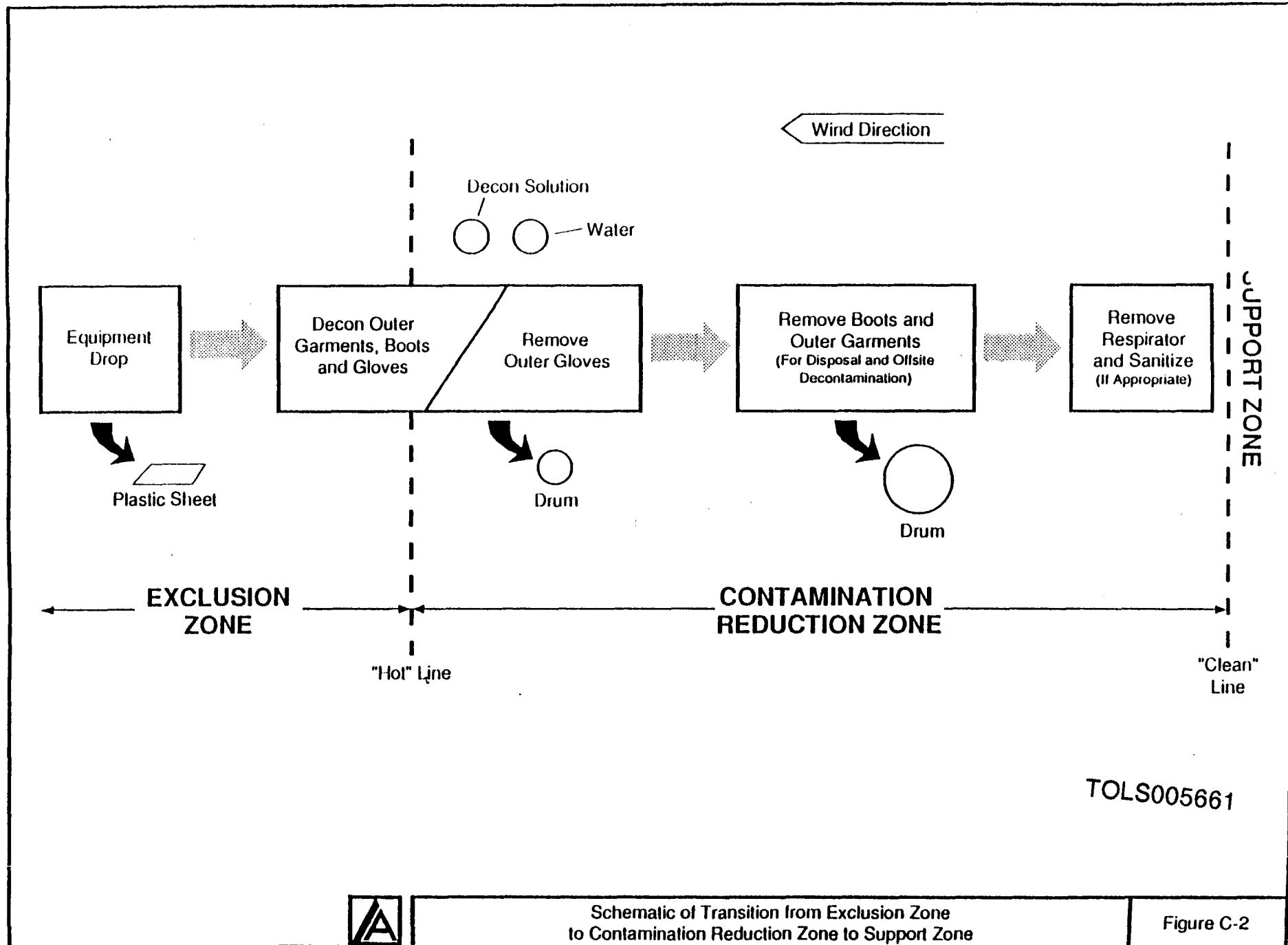
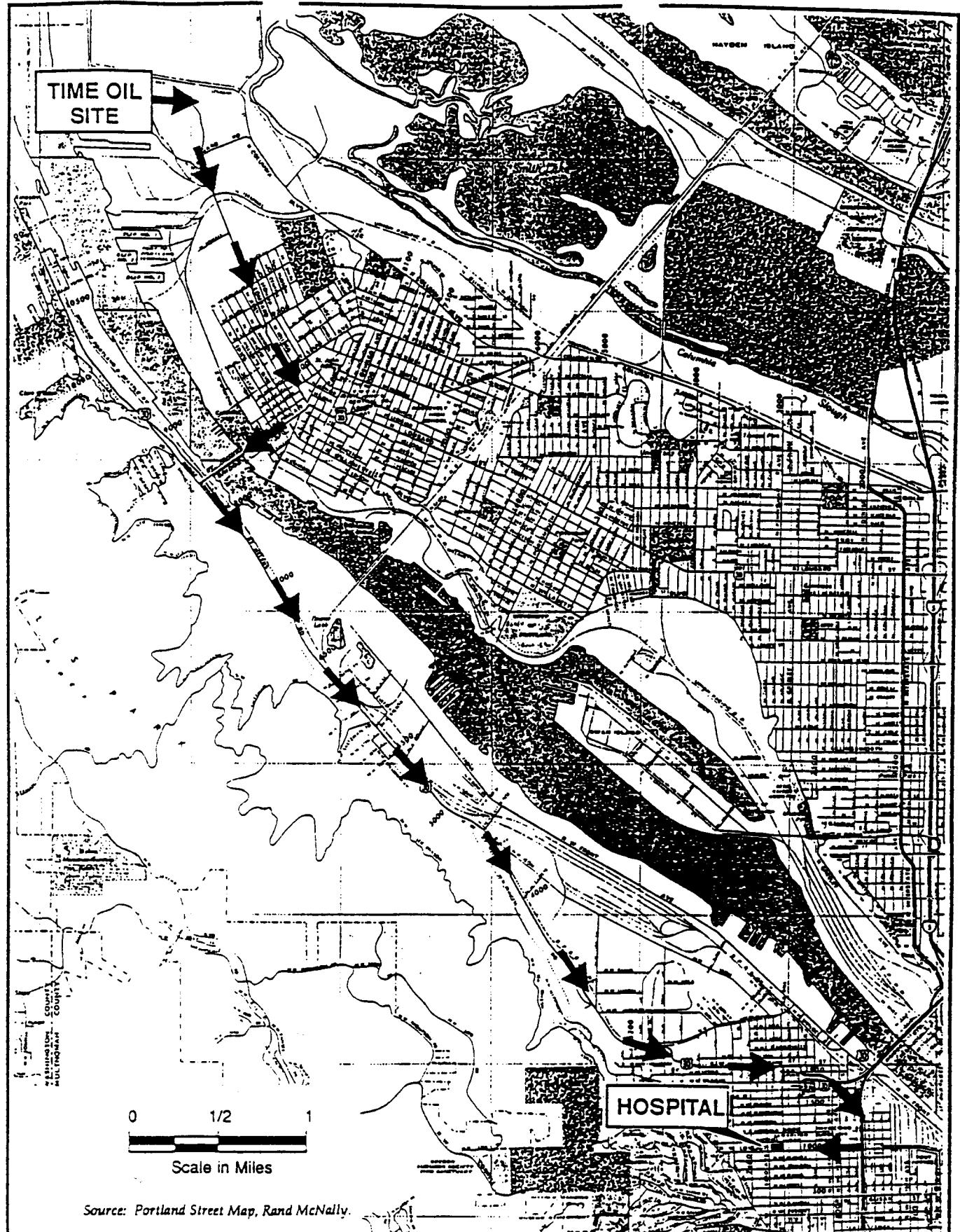
Schematic of Transition from Exclusion Zone  
to Contamination Reduction Zone to Support Zone

Figure C-2



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**TABLE C-1**  
**SITE EXPOSURE ASSESSMENT**  
**TIME OIL CO./NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite			TLV <sup>(b)</sup>	PEL <sup>(c)</sup>	IDLH <sup>(d)</sup>	Exposure Routes <sup>(e)</sup>	Symptoms of Exposure
	Soil (mg/kg)	Groundwater (mg/L)	Other Media <sup>(f)</sup> [mg/kg (mg/L)]					
<b>Organic Chemicals</b>								
Acenaphthene	50	NA	910 <sup>(g)</sup>	DNA	DNA	DNA	DNA	DNA
Acenaphthylene	8.8	NA	ND	DNA	DNA	DNA	DNA	DNA
Anthracene	200	NA	9,100 <sup>(g)</sup>	0.2 ppm <sup>(g)</sup>	0.2 ppm <sup>(g)</sup>	DNA	Inh, Ing, Abs, Con	DNA
Benzene	1	0.64	ND	0.1 ppm	1 ppm	500 ppm	Inh, Abs, Ing, Con	Irritated eyes, nose, respiratory tract, skin
Benzo(a)anthracene	14	NA	160 <sup>(g)</sup>	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Benzo(b)fluoranthene	14	NA	ND	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Benzo(k)fluoranthene	6.6	NA	ND	DNA	DNA	DNA	DNA	DNA
Benzo(g,h,i)perylene	250	NA	6 <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
Benzo(a)pyrene	9.4	NA	90 <sup>(g)</sup>	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
Bis(2-ethylhexyl)phthalate	3	NA	75 <sup>(h)</sup> (0.260) <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
n-Butylbenzene	ND	ND	ND (0.052) <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA
di-n-Butylphthalate	0.11 <sup>(h)</sup>	NA	ND	5 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	4,000 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, lung, stomach irritation
2-Chlorophenol	5.3	NA	ND	DNA	DNA	DNA	DNA	DNA
Chrysene	31	NA	630 <sup>(h)</sup> (ND)	0.2 mg/m <sup>3(g)</sup>	0.2 mg/m <sup>3(g)</sup>	80 mg/m <sup>3</sup>	Inh, Con	Dermatitis, bronchitis
1,1-Dichloroethane	ND	NA	88 <sup>(h)</sup>	100 ppm	100 ppm	3,000 ppm	Inh, Ing, Con	Skin irritation; liver, kidney, lung damage
2,4-Dichlorophenol	3.6	ND	ND	DNA	DNA	DNA	DNA	DNA
2,4-Dinitrotoluene	3	NA	ND	0.15 mg/m <sup>3</sup>	1.5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Anoxia, cyanosis, reproductive effects
Dioxins and furans (TEQ)	0.003	NA	NA	DNA	DNA	DNA	DNA	DNA
Ethyl alcohol	NA	NA	NA	1,000 ppm	1,000 ppm	3,300 ppm	Inh, Ing, Con	Eye, nose, skin irritation, drowsiness, fatigue, headache
Ethylbenzene	NA	1.2	0.002 <sup>(g)</sup>	100 ppm	100 ppm	800 ppm	Inh, Ing, Con	Irritated eyes, headache
Fluoranthene	80	NA	910 <sup>(g)</sup>	DNA	DNA	DNA	DNA	DNA
Fluorene	80	NA	2,300 <sup>(g)</sup>	DNA	DNA	DNA	Inh, Ing, Abs, Con	DNA
2-Hexanone	ND	NA	ND(3.2) <sup>(h)</sup>	5 ppm	100 ppm	1,600 ppm	Inh, Abs, Ing, Con	Eye, nose irritation; drowsiness
Indeno(1,2,3-cd)pyrene	1.7	NA	ND	DNA	DNA	DNA	DNA	DNA
Isophorene	1	NA	ND	5 ppm	25 ppm	200 ppm	Inh, Ing, Con	Eye, nose, throat irritation

TABLE C-1

**SITE EXPOSURE ASSESSMENT  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON**

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite							
	Soil (mg/kg)	Groundwater (mg/L)	Other Media <sup>(a)</sup> (mg/kg (mg/L))	TLV <sup>(b)</sup>	PEL <sup>(c)</sup>	IDLH <sup>(d)</sup>	Exposure Routes <sup>(e)</sup>	Symptoms of Exposure
4-Isopropyltoluene	0.0016	NA	ND	DNA	DNA	DNA	DNA	DNA
Kerosene	NA	NA	NA	DNA	DNA	DNA	Inh, Ing, Abs, Con	DNA
Mineral spirits	NA	NA	NA	500 ppm <sup>(b)</sup>	DNA	1,100 ppm	Inh, Ing, Con	Irritated eyes, respiratory system
Naphthalene	100	NA	1,300 <sup>(b)</sup>	10 ppm	10 ppm	250 ppm	Inh, Abs, Ing, Con	Eye irritation, vomiting
n-Nitrosodiphenylamine	28	NA	ND	DNA	DNA	DNA	DNA	DNA
PCB	68	NA	NA	0.5 mg/m <sup>3</sup> (skin)	0.5 mg/m <sup>3</sup>	5.0 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Eye, nose, throat, skin irritation, chloracne
Pentachlorophenol	116,000	60	1,200,000 <sup>(b)</sup> (9,900) <sup>(b)</sup>	0.5 mg/m <sup>3</sup> (skin)	0.5 mg/m <sup>3</sup> (skin)	2.5 mg/m <sup>3</sup>	Inh, Ing, Abs, Con	Eye, nose, throat irritation, sneezing, weakness, nausea
Phenanthrene	200	NA	4,600 <sup>(b)</sup>	0.2 ppm <sup>(b)</sup>	0.2 ppm <sup>(b)</sup>	DNA	Inh, Ing, Abs, Con	Skin photosensitization
n-Propylbenzene	ND	NA	0.002 <sup>(b)</sup> (0.24) <sup>(b)</sup>	DNA	DNA	DNA	DNA	DNA
Pyrene	50	NA	550 <sup>(b)</sup> (0.014) <sup>(b)</sup>	DNA	DNA	DNA	DNA	DNA
TPH	16,430	56	150,000 <sup>(b)</sup> (360) <sup>(b)</sup>	DNA	DNA	DNA	Inh, Abs, Ing, Con	See benzene, toluene, ethylbenzene, and xylene
2,3,4,6-Tetrachlorophenol	71	0.17	ND	DNA	DNA	DNA	Inh, Ing, Con, Abs	DNA
2,3,5,6-Tetrachlorophenol	ND	0.1	ND	DNA	DNA	DNA	DNA	DNA
Toluene	12	1.6	ND (0.0017) <sup>(b)</sup>	50 ppm	100 ppm <sup>(b)</sup>	500 ppm	Inh, Abs, Ing, Con	Fatigue, dizziness, headache, irritated eyes and nose
Trichloroethene	ND	NA	35 <sup>(b)</sup>	50 ppm	100 ppm	1,000 ppm	Inh, Abs, Ing, Con	Eye, skin irritation; fatigue; liver damage
1,2,4-Trimethylbenzene	ND	NA	0.023 <sup>(b)</sup> (2.4) <sup>(b)</sup>	25 ppm	25 ppm	DNA	Inh, Ing, Con	Eye, nose, throat, skin irritation
Xylenes	11	3.0	0.011 <sup>(b)</sup> (0.130) <sup>(b)</sup>	100 ppm	100 ppm	900 ppm	Inh, Abs, Ing, Con	Dizziness, drowsiness, nausea, irritated eyes and skin
<b>Metals</b>								
Antimony	8	NA	50 <sup>(b)</sup> (0.006) <sup>(b)</sup>	0.5 mg/m <sup>3</sup>	0.5 mg/m <sup>3</sup>	50 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, skin, nose, throat irritation
Arsenic	10	NA	150 <sup>(b)</sup> (0.008) <sup>(b)</sup>	0.001 mg/m <sup>3</sup>	0.01 mg/m <sup>3</sup>	5 mg/m <sup>3</sup>	Inh, Abs, Con, Ing	Ulceration of nasal septum, GI disturbances
Beryllium	0.4	NA	0.3 <sup>(b)</sup> (0.001) <sup>(b)</sup>	0.002 mg/m <sup>3</sup>	0.002	4 mg/m <sup>3</sup>	Inh, Con	Anorexia, weakness, chest pain
Cadmium	2.8	NA	118 <sup>(b)</sup> (0.21) <sup>(b)</sup>	0.01 mg/m <sup>3</sup>	0.005	9 mg/m <sup>3</sup>	Inh, Ing	Pulmonary edema, cough, nausea
Chromium	36.8	NA	48,700 <sup>(b)</sup> (2.1) <sup>(b)</sup>	0.5 mg/m <sup>3</sup>	0.5	25 mg/m <sup>3</sup>	Inh, Ing, Con	Eye irritation, dermatitis
Copper	90.5	NA	1,540 <sup>(b)</sup> (5.05) <sup>(b)</sup>	1 mg/m <sup>3</sup>	1	100 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, nose, pharynx irritation

TABLE C-1

SITE EXPOSURE ASSESSMENT  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON

Hazardous Material/ Chemical Constituent	Maximum Concentration Detected Onsite				PEL <sup>(e)</sup>	IDLH <sup>(d)</sup>	Exposure Routes <sup>(e)</sup>	Symptoms of Exposure
	Soil (mg/kg)	Groundwater (mg/L)	Other Media <sup>(a)</sup> (mg/kg (mg/L))	TLV <sup>(b)</sup>				
Lead	776	NA	186,000 <sup>(h)</sup> (12.3) <sup>(h)</sup>	0.15 mg/m <sup>3</sup>	0.05	100 mg/m <sup>3</sup>	Inh, Ing, Con	Weakness, lassitude, insomnia, kidney disease
Mercury	0.13	NA	223 <sup>(h)</sup> (0.0031) <sup>(h)</sup>	0.1 mg/m <sup>3</sup>	0.05	10 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Eye, skin irritation
Nickel	42	NA	60 <sup>(h)</sup> (3.7) <sup>(h)</sup>	1 mg/m <sup>3</sup>	1	10 mg/m <sup>3</sup>	Inh, Ing, Con	Dermatitis, asthma, pneumitis
Selenium	8	NA	80 <sup>(h)</sup> (ND)	0.2 mg/m <sup>3</sup>	0.2	1 mg/m <sup>3</sup>	Inh, Ing, Con	Eye, skin, nose, throat irritation
Silver	0.6	NA	8 <sup>(h)</sup> (0.2) <sup>(h)</sup>	0.01 mg/m <sup>3</sup>	0.01	10 mg/m <sup>3</sup>	Inh, Ing, Con	Blue-gray eyes; skin, nose, throat irritation
Thallium	16	NA	140 <sup>(h)</sup> (0.009) <sup>(h)</sup>	0.1 mg/m <sup>3</sup>	0.1	15 mg/m <sup>3</sup>	Inh, Abs, Ing, Con	Nausea, diarrhea, abdominal pain
Zinc	1620 <sup>(j)</sup>	NA	4,180 <sup>(h)</sup> (21.0) <sup>(h)</sup>	DNA	DNA	DNA	DNA	DNA

DNA = data not available.

NA = not analyzed.

ND = not detected.

TEQ = toxicity equivalent quotient per EPA (1989).

J = the analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

(a) Other media refers to solids or residual material (e.g., drum contents, sludge). Results in parentheses are for water/liquids other than groundwater (e.g., drum liquids, standing water).

(b) TLV = Threshold limit value, as defined by the American Council of Governmental Industrial Hygienists (1994).

(c) PEL = Permissible exposure limit, as defined by the Occupational Safety and Health Administration (1995).

(d) IDLH = immediately dangerous to life and health (NIOSH).

(e) Exposure route codes: Inh = inhalation; Ing = ingestion; Con = skin and/or eye contact; Abs = skin absorption.

(f) Results are for sludge removal from tanks located in the former Crosby and Overton tank area.

(g) TLV/PEL for total coal tar pitch volatile s(benzene soluble fraction) includes anthracene, benzo(a)pyrene, phenanthrene, acridine, chrysene, and pyrene.

(h) Result is for drum contents in eastern portion of the property.

(i) Estimated value of analyte detected and confirmed by analyst with low spectral match parameters.

(j) Result is for visually distinguishable surface solids limited to a small area in the eastern portion of the property.

(k) TLV for mineral spirits is for petroleum distillates.

(l) Pentachlorophenol result is >100% due to laboratory dilutions.

(m) Per OAR 437, Division 2, Subdivision Z.

TABLE C-2  
ACKNOWLEDGEMENT

I have read the attached Health and Safety Plan for the work at Time Oil Co.'s Northwest Terminal, Portland, Oregon. I have discussed any questions which I have regarding these materials with my supervisor, and I understand the requirements of the health and safety plan.

Employee _____	Date _____
Site Safety Officer _____	Date _____

TABLE C-3  
MODIFICATION TO HEALTH AND SAFETY PLAN  
TIME OIL CO., NORTHWEST TERMINAL

DATE \_\_\_\_/\_\_\_\_/\_\_\_\_

Modification: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Reasons for Modification: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Site Personnel Briefed:

Name: _____	Date: _____

Approvals:

Site Safety Officer: \_\_\_\_\_  
Manager: \_\_\_\_\_  
Others: \_\_\_\_\_

**TABLE C-4**  
**ACTION LEVELS FOR PERSONAL PROTECTION**  
**TIME OIL CO./NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Monitoring Parameter	Reading <sup>(a)</sup>	Level of Protection
<b>Within Active Tank Farm Area</b>		
Organic Vapors (during all intrusive activities)	PID reading >1 ppm in breathing zone for more than 15 minutes or >5 ppm for momentary peak  Detector tube reading for benzene is 0-1 ppm  PID or detector tube reading for benzene 1-10 ppm (or >50 ppm short term)  PID or detector tube reading for benzene is 10-50 ppm (or >250 ppm short term)  PID or detector tube reading >50 ppm or >250 ppm short term	Use detector tube  Modified Level C  Level C with half-face respirator with organic vapor and HEPA cartridges  Level C with full-face respirator with organic vapor and HEPA cartridges  Cease operations and evacuate area
Combustible Gas Indicator (Gas Tech GX8 2 or equivalent)	Explosive Atmosphere (measured at the source or near the excavation).  <10% LEL  >10% LEL	Continue activity, monitor for toxics  Evacuate all personnel from near excavation
Oxygen Meter	Oxygen (measured in breathing zone)  <19.5%  19.5-23.5%  >23.5%	Evacuate area  Continue monitoring  Remove and shut off ignition sources
Airborne dust	Soil is moist and nondusty or dust monitoring (MiniRam) reads <4 µg/m³ over background  Soil is dry and dusty as judged by site safety officer or dust monitoring reads >4 or <50 µg/m³ over background  Visible blowing dust clouds or dust monitor reads >50 µg/m³ over background	Level D modified  Level C with half face respirator with organic vapor and HEPA cartridge  Cease operations until site conditions improve or soil is watered

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TABLE C-4

**ACTION LEVELS FOR PERSONAL PROTECTION  
TIME OIL CO./NORTHWEST TERMINAL  
PORTLAND, OREGON**

Monitoring Parameter	Reading <sup>(a)</sup>	Level of Protection
<b>All Other Areas of Facility</b>		
Organic Vapors <sup>(b)</sup>	0-5 ppm over background <sup>(c)</sup> (5 minutes)	Level D (modified)
	5-10 ppm over background	Level C - half-face air purifying respirator equipped with organic vapor and HEPA cartridges; full-face respirators with organic vapor and HEPA cartridges are required if contaminated liquid splashes or sprays are likely to be encountered
	>50 ppm over background	Leave the work area
	>100 ppm over background (instantaneous)	Leave the work area
Airborne dust	Soil is moist and nondusty or dust monitoring (MiniRam) reads <4 µg/m³ over background	Level D modified
	Soil is dry and dusty as judged by site safety officer or dust monitoring reads >4 or <50 µg/m³ over background	Level C with half face respirator with organic vapor and HEPA cartridge
	Visible blowing dust clouds or dust monitor reads >50 µg/m³ over background	Cease operations until site conditions improve or soil is watered

- (a) Readings are sustained readings over at least a 1-minute duration unless otherwise noted.
- (b) Determine using a photoionization or other appropriate organic vapor detector.
- (c) Background readings obtained 50 ft upwind of site activity.

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TABLE C-5

**EMERGENCY SERVICES**  
**TIME OIL CO./NORTHWEST TERMINAL**  
**PORTLAND, OREGON**

Service	Name/Location	Phone Number
Ambulance	—/—	911
Fire	—/—	911
Police	—/—	911
Hospital	Good Samaritan Hospital 1015 N.W. 22nd Avenue Portland, Oregon (driving time estimated at 15 to 20 minutes, traffic permitting)	229-7260

**CONTACT INFORMATION**

**Time Oil**

Kevin Murphy Senior Environmental Specialist	206/286-6443 (office) 206/680-5612 (pager)	Seattle, WA
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**Landau Associates**

Leslee Conner Project Manager	206/778-0907 (office) 206/781-8118 (home)	Edmonds, WA
Rebekah Brooks Health and Safety	206/778-0907 (office)	Edmonds, WA

TABLE C-6  
EMPLOYEE EXPOSURE/INJURY INCIDENT REPORT  
(Use additional page if necessary)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name: \_\_\_\_\_ Employer: \_\_\_\_\_

Site Name and Location: \_\_\_\_\_

Site Weather (clear, rain, snow, etc.): \_\_\_\_\_

Nature of Illness/Injury: \_\_\_\_\_  
\_\_\_\_\_

Symptoms: \_\_\_\_\_

Action Taken: Rest: \_\_\_\_\_ First Aid \_\_\_\_\_ Medical \_\_\_\_\_

Transported by: \_\_\_\_\_

Witnessed by: \_\_\_\_\_

Hospital's Name: \_\_\_\_\_

Treatment: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_

What was the person doing at the time of the accident/incident? \_\_\_\_\_  
\_\_\_\_\_

Personal Protective Equipment Worn: \_\_\_\_\_  
\_\_\_\_\_

Cause of Accident/Incident: \_\_\_\_\_  
\_\_\_\_\_

What immediate action was taken to prevent recurrence? \_\_\_\_\_  
\_\_\_\_\_

Additional comments:

Employee's Signature: \_\_\_\_\_ Supervisor's Signature: \_\_\_\_\_

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

Site Safety Representative's Signature  
\_\_\_\_\_

**SCHW. SE  
WILLIAMSON  
& WYATT**  
P.C.  
ATTORNEYS AT LAW

PACWEST CENTER, SUITES 1600-1800  
1211 SOUTHWEST FIFTH AVENUE • PORTLAND, OREGON 97204-3795  
TELEPHONE: 503 222-9981 • FAX: 503 796-2900 • TELEX: 650-686-1360

PATRICIA M. DOST

February 5, 1996

Mr. Anthony G. Hopp  
Wildman, Harrold, Allen & Dixon  
225 West Wacker Drive  
Chicago, Illinois 60606-1229

Re: Time Oil Northwest Terminal

Dear Tony:

In late November, I wrote to you suggesting a conference call with our clients. I hope that the fact that we have had no response from you means only that you have been busy. We remain anxious to confer with you and your client at your earliest convenience.

In the meantime, Time Oil would very much appreciate it if Beazer would provide it any available technical information on a number of proprietary chemicals used in the formulation of Koppers' products at the Northwest Terminal. We have virtually no information about the following:

1. Nalco 6SJ743 (polyester)
2. Eastman Kodak Solvent KB3
3. Eastman Kodak Solvent B11
4. Monsanto oxo-alcohol High Boilers
5. Charter International Oil Company Espesol 310-66 (short-range mineral spirits)
6. Koppers WR340 Concentrate
7. Koppers Petroset II (specific gravity 1.03)
8. Stoddard Solvent

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PORLAND      SEATTLE      VANCOUVER      WASHINGTON  
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503 222-9981    206 622-1711    360 694-7551    202 634-8901    (SWW1/89360/82295/PMD/635225.1)

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